Title page for vol IX. here

CANADA SCHOOL JOURNAL

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Table of Contents.

Editorial :—
- Wanted 1
- Deepen the Channel 1
- History in the Public Schools 2
- Normal Institutes 2
- The Function of the High School 3
- Notes 3
- Gleanings 4

Mathematical Department 5

Special Articles :—
- Notes of Talks on Teaching 7
- Music in the Public Schools 8
- Training that Educates 9

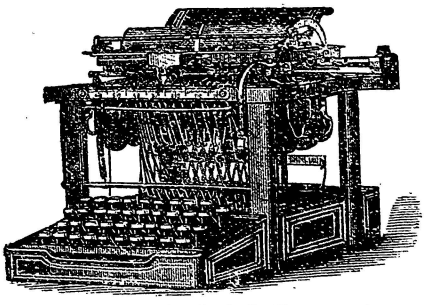
Promotion Examinations 12

Practical Department :—
- Hints on Teaching Spelling 14
- Reading Aloud 15
- The University,—How and What ? 15
- Normal Schools : their Origin, Object, and Condition 16
- The Model School 17
- Co-education of the Sexes 17
- Common Sense & Special Sense in Common Schools. 17
- Rules for Teaching 18

Notes and News :—
- Ontario 19
- Nova Scotia 20
- Manitoba 21

Teachers' Associations 22

Reviews 24



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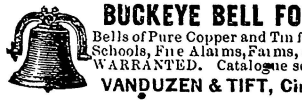
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VOL. IX. TORONTO, JANUARY, 1884. No. 1.

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The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

WANTED.

This country wants an army of trained teachers—one corps for each province, a brigade for each county, a regiment for each township, a master-spirit for each school. At the head of each army corps we want a general filled with a high ideal of the grandeur of the educational movement, and charged with that majestic earnestness which lights the fires of enthusiasm all along the lines from rank to rank, and binds men together in the brotherhood of a glorious common enterprise. We want training schools in which the recruits shall not only learn to handle skilfully their weapons but shall also imbibe most thoroughly the professional *esprit de corps*, and, spurning all grosser ambitions, shall lay their lives on the altar of their country for the moral and intellectual elevation of the nation. The outfit and accoutrements of this army required to put it in first-rate marching order will cost millions. But the outlay will secure conquests wide as the Dominion and lasting as eternity.

Hitherto the forces sent into the educational field have been chiefly militia, untrained in methods, unpractised in the higher parts of their profession, and unable to cope victoriously with the forces leagued in solid phalanx against them. Their partial success with the imperfect outfit at their command, with the small rewards doled out to them, the paltry prizes within their reach, and the circumscribed career possible to them, prove abundantly the heroic temper and sterling courage of the teachers who have thus far educated this sinewy young nation. No man can deny that our teachers have fully availed themselves of all the encouragements and means of improvement placed within their reach. What they have done is but earnest of what they will do, if enlightened statesmen can be found who will lead public opinion, and multiply all the facilities required to convert these annual levies into a regular army of disciplined veterans.

A wider career must be made possible for every teacher who will devote his life and his talents to the work. The prizes of the profession must be made far more numerous, and their value must be increased tenfold. The dead level of mediocrity must be broken up, and the chances of reward made commensurate with the importance of the service. Why are experienced teachers always falling out of the ranks? How is it that after eight or ten years' service men of high intellect, unconquerable will, and indomitable perseverance, quit the service and seek some other field for the exercise of their powers? The answer is an open secret to every onlooker. A man of parts and energy finds that he has entered a blind alley at the end of which his ambition finds no further prizes in view. In plain words he discovers that $1000 or at the maximum $2000 is the final limit of his income—a sum which almost any third-class division court lawyer can secure with a tenth part of the teacher's training and a mere fraction of his daily toil.

We want a revolution of no small magnitude in the educational army—a revolution even greater than that in the British army which put an end to that time-honored iniquity, the sale of commissions, and opened to every private soldier the possibility of reaching the highest prizes of his profession by sheer force of valor and genius. In this case the prizes have yet to be created which will hold men loyal to the profession of teaching, and make it more than a mere step-ladder to some other calling which offers more substantial rewards and makes more ample returns for the brains, labor, time, and money invested.

European ideals must now and forever be discarded. We live on the American continent, and our plans must harmonize with the requirements of American life, which hold out solid prizes to every man in commerce, agriculture, law, divinity—to the inventor, the financier, the physician, the manufacturer—in fact to every one but the teacher if he remains loyal to the profession of his choice.

We appeal to public opinion and especially to our legislators to burst these barriers, and open up a career in the educational field which will command the services of the best talents and the most god-like intellects which shall arise amongst us during the next century. Let the money be voted, the result will soon be apparent.

DEEPEN THE CHANNEL.

The *Illinois School Journal* has a sensible article on "Our Village High Schools" which is interesting, as affording a sufficient reply to those well-meaning persons amongst us who are constantly discovering that some other new subject "should immediately be taught in all the schools." The *Journal* says, in effect, that the high schools of Illinois attempt with a three years' course, Latin, Greek, English, and "each of the natural sciences," except, perhaps, geology.

"In the endeavor to extend the field of study over so large an area, each science receives scarcely more than a single term's study. What can be done with such subjects as zoology, physics, astronomy, and botany in twelve weeks? By the present prevalent method, a pupil has no sooner acquired a little momentum in a certain direction, and begun to find himself in sympathy with certain lines of thought, than he is rudely stopped and thrown into a new field of investigation, to repeat the same absurd performance. Some heroic soul is going to draw a pencil through half the subjects in the high school course one of these days, and endeavor to secure something like a fair acquaintance with the other half."

No doubt the system of options lately introduced into our high school programme has afforded a measure of relief to the students, but what about the teachers who are obliged to split their time into smaller fragments, or to teach extra hours to cover the extra work? Our advice is that masters themselves should choose the options for their own schools and thus keep the course well within the teaching power of the staff. *Non multa sed multum.* Confine the study of junior students within tolerably narrow limits; deepen the channel of thought; and keep up a high standard of examination.

HISTORY IN THE PUBLIC SCHOOLS.

We confess deep dissatisfaction with the present system in the subject of History. "Proceed from the known to the unknown" is the keynote of the programme in geography, in arithmetic, in reading. But when we come to the item of history we find the maxim exactly reversed. Proceed from the ancient Britons to Victoria, proceed from unknown centuries to our own times, begin with a country separated from the known *here* and *now* by 3,000 miles of space and 20 centuries of time, says the programme in laying out the child's first course in the wide study of history. On what ground can this be defended?

Some say the learner must have first of all a bird's-eye view, must have the great land-marks of history firmly fixed in the memory. Let us not abandon the principle on which we teach science, mathematics, geography, for a mere unproved hypothesis. Having established a sound principle and found it victorious in teaching chemistry, why should we let go of it when we come to teach history, the exact parallel of chemistry in many important particulars? Must the learner first of all get a bird's-eye view of chemistry? Must he not rather sit down and study the facts that are most easily accessible, and get some idea of what chemical action really is by carefully observing and comparing things which he can know for himself at first hand? In the study of history the child must begin with the known; he must get his first ideas of historical movement in the same way as he gets his first ideas of number; he must construct the historical unit before he can possibly compare, classify, and generalise the great mass of details included in the history of any country. He must begin with what he can realise, appreciate, understand. We do not deny that a child may be drilled over dry dates and the names of great events (to him wholly meaningless) until he has the outward semblance of historical knowledge. But what is the benefit of such teaching beyond the mere exercise of the memory involved? Does a child so taught really *know* any one single thing about history? Certainly not. Perhaps some truth, some historical perspective, may dawn upon his mind in after years as his powers of reflection and constructive imagination come to maturity. Meantime, he has absolutely no knowledge of history. Let those accustomed to examine public schools witness the truth of the statement. The answers to the entrance examination papers settle the question forever.

The history of his own county, the history of his own country, the history of the mother country, the history of countries nearly related, the general history of the world,—Canada, England, United States, Rome, Greece,—are not these the steps indicated by the great maxim we have quoted? Three months' work on Canada since 1763—three months' work on England since 1688—there in a nutshell lies the *possible, practical, teachable* course of study for Canadian public schools. Away with the mass of dry bones. Let us have HISTORY, something that a boy can see and feel and appreciate, something with educative power in it. Down with the ancient Britons.

In this matter our cousins across the lines are much in advance of us. Every child there knows first of all the history of the country in which he lives. History in that case has a species of fascination. Patriotism wells up spontaneously, oftentimes effusively. We are at the very opposite pole. The history of the last three hundred years is less familiar to our pupils than are the times of Alfred and William the Norman. The history of the last hundred years in Canada is least known of all. How blindly must a young Canadian follow the march of events from year to year who knows little or nothing of his country's history through the stirring times when his grandfather was a boy. There are great questions and struggles still to come. Let us prepare our pupils for the duties of citizenship, even in defiance of the bird's-eye and landmark hypothesis. Canada for us Canadians, Britain for us British; but let charity begin at home.

NORMAL INSTITUTES.

Mr. Friesner gives in the December number of the *Ohio Educational Monthly*, some of the "Good Points in Iowa's Schools." He mentions very small school districts; a State University; a State Normal School; a State Teachers' Association at which there is a large attendance; county superintendents, some of whom are ladies; no politics in local school elections; few changes in school-boards, teachers and superintendents; and county normal institutes, one of which is conducted each year in every county in the State. These institutes are the analogues of our county model schools. There is a uniform course of study for the State, consisting of four years'

work. The length of the session depends on the revenue which is made up by $50 from the State, a fee of $1 from each attendant, and $1 from each applicant for certificate. Certificates are granted for one year only. The largest normal institute fund for 1882 was $1,213, the smallest $151. The shortest session was two weeks and the longest nine weeks, the average was three weeks. The county superintendent takes charge, and, assisted by the State superintendent, provides suitable conductors and instructors.

It strikes us very forcibly that an adaptation of this normal institute to suit our wants, is one of the measures of the near future. We have dwelt on the institute aspect of our county associations many times before. We notice that actual teaching is becoming the rule in many of the leading counties, that dry essays, and aimless volubility are slowly taking a lower rank, that practical professional work is more and more highly appreciated. We have seen more and more invitations given to highly qualified professional specialists to give tone, unity, and direction to our associational meetings. Our next step in advance lies in the direction of more thorough organisation, a uniform course of work, for example such a one as that laid down in Baldwin's *Art of School Management*, and the appointment by the government of three or four professional conductors to attend our associations during the winter and summer and to lecture in the county model schools during autumn. The reform briefly indicated would be almost equal to a third normal school if the semi-annual meetings were extended to a whole week each, attendance made compulsory, and one half of each day devoted to a fixed course of study. In unity and concentration lie power and progress.

THE FUNCTION OF THE HIGH SCHOOL.

In a paper read at the Institute for graded School Teachers, Mr. H. J. Taylor, a county superintendent of schools, Wisconsin, gives his views on the sphere of the high school. We summarize his statements: "The most prominent as well as the most important function of the high school is to give better and more available conditions for continued and thorough instruction than the elementary schools can give; better in point of educational training, more available in point of locality and expense. These high schools are able to engage and do engage superior teachers, and this fact itself insures superior instruction. The superior teacher is the first gain and the greatest gain of the free high school. The elementary schools at the cross-roads can never do their best work until they find the high schools available, and feel its inspiration.

"The second important function of the high school is, to enlarge, improve, carry onward and upward the work of the district and grammar schools. The one union that must not be wanting is the union of the high and elementary schools. In addition to their own higher and better instruction, these high schools cannot fail to strengthen and give increased efficiency to the elementary schools. The demands upon the time and talent of the country teacher are great. To be relieved of half a dozen of the best scholars is a gain to the pupils who find a school to tax and train them; to the teacher, whose work can be better done because done within narrow limits; to the remaining pupils, who can now receive the more careful and thoughtful attention of the teacher.

"The third function of the high school is to so prepare young people in scholarship that they may become competent teachers of the elementary schools. Would you change our high schools into normal schools? No, not that. The good of the many should control the work of the high school. But the good of a large minority is not to be disregarded.

"The fourth function of the high school is to prepare students for entering our higher institutions of learning, and specially our State University. It does not seem to me that many of our high schools can do this additional work profitably and without material loss to other interests. I agree that a high school course that robs the many of practical education that the few may gain a royal entrance into any higher institution can result in permanent good to neither. The gain of the hour gives the conditions for a large and permanent loss. A course of languages that begins and *ends* in even the best high schools is a prodigal waste of precious time. In my opinion such a course belongs only to the few high schools best equipped in instructional force."

These, then, are the conclusions of this paper :—

First. The high schools should give better and higher instruction than the elementary schools can give and do give.

Second. A good common school education in the English branches should be the controlling factor in the course of study. A high school is only a higher elementary school.

Third. Provision should be made for reasonable instruction in the theory and art of teaching to aid those pupils who may become teachers of our elementary schools. This work should be optional with at least those not intending to teach.

Fourth. When the instructional force is sufficient without material loss to other interests, pupils should receive special preparation for the State University. So far as preparation for classical courses is concerned, this work should be limited to those that can reasonably expect to continue the studies in some higher institution."

In a recent report to the Counties' Council Inspector, Arthur Brown, of Dundas, makes some excellent recommendations respecting teachers salaries. He points out the fact that poor salaries are at the bottom of so much change in the ranks of our teachers, that this change of employment continues from year to year simply because teaching is paid for at "a remuneration but slightly above that of farm laborers, and domestic servants," and that consequently "very few indeed enter the profession with the view of spending their lives in it." He suggests a scheme for augmenting the salaries of teachers sufficiently to make it worth their while to remain in the school room :

1. The County Council to raise a fund from each township, say at the rate of sixty cents on a thousand dollars' assessment.

2. No section to draw on this fund while employing a teacher with a temporary or extended certificate.

3. No section to participate in the fund that does not tax itself two and a half mills on the dollar for teacher's salary.

4. The fund to be divided among the sections entitled to it in proportion to their rates for salaries only, so that a section levying five mills on the dollar to pay its teacher, shall draw twice as much as one that taxes itself two and a half mills.

We thoroughly agree with Mr. Brown as to the cause of the immense annual exodus from the teaching profession. We hope to see a general agitation for the cure of this gigantic evil. If a regular provincial grant were made in accordance with the grade of certificate held by each teacher a great step in advance would be secured. Public opinion must be educated up to this point. When a certain grant is made for a third class certificate, twice as great a grant for a second, and four times as great for a first, the matter will be brought within the comprehension of the average trustee.

We prize the esteem of our friends, and never wantonly shock their prejudices. On the University Question we are, however, compelled to differ somewhat from both disputants. In our last issue we adhered to the traditional policy of the JOURNAL; our statements were guarded and, we believe, strictly accurate. Nevertheless a valued correspondent, deeply interested in the debate, complains in good set terms of the expressions, "exaggerated statements," and "bitter partisans." A month ago we received a vigorous protest from another highly esteemed correspondent, who felt deeply injured by a couple of lines which merely told the settled public opinion of this province on the other side of the question. So far as courteous language is concerned we are anxious to set a good example; no one concerned in this matter can gain anything by the use of intemperate language. The supporters of the denominational colleges have everything to lose by making charges which cannot be proved; the friends of the University have everything to lose by obstinately clinging to an effete institution which has outlived its mission; higher education has everything to lose by hostility and recrimination between those who are its natural guardians. We willingly incur the pains and penalties of independence, to make at one those whose interests are identical and undivided.

GLEANINGS.

We select the following from letters which have appeared in *The Times* on the subject of "Reading Aloud" in schools.

The Rev. J. R. Bryne:—"Sir,—A letter has been addressed to H. M. Inspectors of Schools by a well-known master of elocution, offering to lecture to teachers and pupil teachers in their respective districts on the art of reading aloud; and the subject is of so much interest educationally, and consequently of such moment to the community at large, that I crave your permission to call public attention to it. Reading is the most important of the three subjects which should form the main staple of the instruction given in elementary schools. He who has mastered it has obtained possession of the key to that vast storehouse of knowledge which is represented by books, and it may be doubted whether any one is completely master of the art, so as to practise it easily, habitually, and with pleasure, who is not to some considerable extent expert in reading aloud. At any rate, reading aloud is held, and justly held, to be the one test by which to judge of proficiency in reading. In elementary schools in Germany, if I mistake not, reading—that is, reading aloud—is the subject proficiency in which determines the class in which the scholar is placed on his first admission to the school. One main object of the elementary school is, or ought to be, to turn out scholars, when they leave it, who have a taste for reading. After this preface I shall scarcely be believed when I repeat, what is matter of common remark among all who are versed in the subject, that, in schools under the supervision of the Educational Department, reading is the most 'passed'—that is the most liberally paid for—and notoriously the worst taught of all the three 'R's.' True, scholars as a rule 'can read'—that is, they can express more or less correctly in speech the sounds represented by the words before them; and the traditional singsong of the dame school has been almost, although not entirely, improved away in schools under Government. But, beyond this, there is little progress. Articulate, intelligent, expressive reading, suitable to the reader's age, with correct pronunciation, is a rarity indeed in elementary schools, and is rarely aimed at by the vast majority of teachers and pupil teachers. Fluency—to turn the tap—that is what they aspire to for their scholars and for themselves, and it is to be feared that recent alterations in the Code of Education, whereby reading books are regarded mostly as vehicles of information, and stress would seem to be laid rather on the matter than the mode of the reading, may be held—wrongly of course—to give the sanction of authority to what is an inveterate and much to be regretted mistake. I know there are those who will differ from me and maintain that mere fluency is sufficient. Reading aloud, they will say, is for culture, not a necessity for life, but rather a luxury. It is in the front rank of accomplishments, perhaps, like drilling and dancing, but nothing more. We do not need that all our children, least of all the children of the working classes, should be brought up to be public speakers or to go on the stage. Let those learn to read aloud who have to get their living by reading aloud. The working man is sufficiently equipped for the journey of life if he is in possession of that key to knowledge which the mere ability to read at all supplies him with. But, again, I repeat that of that key he is not yet master until he can use it without difficulty and with pleasure. He will not like to read until he likes reading, and reading he will be most disposed to like and to pursue as a habit when he can practise it with that accuracy of apprehension and fulness of enjoyment and profit which are his and his alone—with rare exceptions—who has attained to some considerable degree of proficiency in reading aloud. For this reason I would venture to commend to the favor of the public generally, as well as to that of educational officials, all well-advised efforts that may be made to popularise and improve instruction in reading aloud, as in truth a matter of national importance.

Mr. J. S. Laurie, formerly H. M. Inspector of schools:—"Mr. Bryne's letter is a true but severe commentary on the Code, and his criticism is amply confirmed by all his brother Inspectors—namely, that 'articulate, intelligent and expressive reading is a rarity in elementary schools.' That reading stands first and foremost in the rank of elementary branches of instruction also commands universal assent. Hence it follows that the major part of the toil and expenditure—amounting to a lump sum of six millions sterling—fails in the most important particular. He states that reading is the subject most easily 'passed' by the Inspectors; in other words, that fairly correct utterance is the accepted standard of qualification. Such a test as applied to even mechanical reading is, however, inadequate where, as is generally the case, the hearer uses a book; for if the reading is unintelligible through the ear alone, it is clearly worthless. Were such a rule put in force, instead of indistinct mumbling we should soon have at least articulate and loud reading of a certain kind. Intelligent reading is a more difficult question, reference to which in Schedule 1 is relegated to an obscure note. Mr. Bryne indicates the main obstacle to its attainment in deprecating the new fangled and, at the same time, antiquated notion of the Education Department in favor of reading of a specifically historical and geographical kind. Nothing could be more nicely calculated to defeat a most desirable aim. Barren facts of time and place cannot by any conceivable process be couched in language adapted for fluent reading, or, indeed, for exciting in a young bewildered mind the smallest particle of interest. The laudable object of the Department is to secure, along with the aquisition of the art of reading, the conveyance of information of a useful kind. But in regard to history the subject is by far too complicated to be learned in so perfunctory a manner; and, besides, the effort amounts to a *reductio ad absurdum* on finding that about three-fourths of our elementary scholars finish their 'education' at Standard IV. They consequently leave school under the impression that English history ceased either at the date of the battle of Hastings or at the end of the Wars of the Roses. If history must be taught to children, it would be more practical, if not more sensible, to begin with the reign of Queen Victoria and go backwards, according to periods. To be learned aright, geography as well as history should be taught morally, and the latter

should obviously be confined to the highest standards. At all events, we may rest assured that the subject matter of a reading book should be of a literary type, with which a vivid historical narrative or graphic description of a country, or even of a mechanical invention, is not necessarily inharmonious. Moral tales, fables, and literary selections of a high quality of style furnish the best, if not the only material, either for exercising the art of reading or for creating a taste for reading, without which all is in vain."

The Rev. Main S. A. Walrond :—"The two letters by Mr. Bryne and Mr. Laurie treat of the neglect of reading aloud in elemenfary schools. For the last ten years I have been examiner in reading aloud for the Oxford local examinations at the London centre. The candidates at these examinations come chiefly from the middle-class schools. As regards their reading aloud, I can repeat Mr. Bryne's words :—'Intelligent, expressive reading, suitable to the reader's age, with correct pronunciation, is a rarity.' The reading aloud seems to get worse every year in these local examinations, and the older the ages of the candidates the poorer seem the readers. Nor are the reasons far to seek. In many schools reading aloud is never taught as a separate exercise ; the pupils, perhaps, in the Scripture or history lesson, read a verse or a passage in turn in class, and this is all. Even in schools where reading aloud is more definitely taught, it is too often forgotten that it must be learnt by ear as well as by eye. The master ordinarily contents himself with 'hearing the reading lesson,' noting the misreadings of his pupils, their neglected stops, misplacements of the letter 'h,' or, perhaps, correcting their faulty pronunciation of hard words. But reading aloud cannot be taught thus—the master must give, not hear only, the lesson. His pupils should listen as much as he. He himself should be a practised reader, so that they may catch from his lips clear articulation, proper intonation, spirit, and style. It is to be regretted that schoolmasters do not set more value on good reading aloud. It is no mere matter of mechanical aptitude, or a superficial accomplishment. It needs strict mental attention and watchful accuracy of utterance, and, more than these, brightness and sympathy of intellect, good sense, tarte, and feeling. Reading aloud is no mean test of education and culture. Nine times out of ten, a blundering, slipshod, dull, vulgar reader betrays a blundering, slipshod, dull, vulgar thinker."

"M. A.," Cambridge :—"I read with much interest your article on the subject of 'Reading Aloud,' and I have followed with careful attention the various letters that have appeared in the *Times* on the same subject. Some years ago, when I had the personal superintendence of large schools, a plan was adopted for teaching reading which proved very successful. When the teacher took the more advanced classes in the school for a reading-lesson, he was not allowed to have any book in his hand. The children were told that they must, each of them, read the passage which came to their turn in such a manner as to be perfectly audible to the teacher, and with such inflection as to convey the sense of the passage. When any child failed to make the teacher hear, he had to read the passage again and again till he succeeded in making himself heard. In the same manner with respect to the meaning of the passage read, if a child fail in the first instance to convey the meaning, he was made to try once more ; if he failed a second time, the teacher was told to call for a child who could give the meaning, and so the process went on till the meaning was correctly conveyed. This system was the means of exciting a great deal of emulation, and of bringing out the intelligence of the pupils. They were all eager to show how well they understood the passage before them. As a proof of the success of the system I am speaking of, our first class went to Exeter to take part in a reading competition, and carried off all the reading prizes. Their reading attracted considerable attention, and the judges were eager to know where the boys had been trained. I must add that for the success of the system the school must be kept quiet, — only one class being allowed at the same time to have a reading-lesson."

Mynie Bell Fairfax, Queen's Room, Royal Albert Hall :—"Having been, so far as I can learn, the only person who has for many years held classes for teaching intelligent reading to children from the age of five, perhaps you will kindly allow me to record my experience. Teaching is, to a considerable extent, a gift of nature, but one who possesses it can, by paraphrase and explanation, make much of the highest kind of poetry perfectly intelligible to very young children. Their sympathies are easily roused, their ears keener and quicker than those of adults, their organs of speech more flexible, and above all, their observation more accurate. I can teach my junior class to act and declaim a scene from Shakespeare better and more easily than the senior class, for it takes months to unlearn the faulty methods of voice production and pronunciation acquired from unskilled teachers in the nursery or schoolroom. Though the junior class at the Albert Hall continues one hour and a half, I have seldom a more attentive or appreciative audience than that formed by thirty to forty little girls under twelve, and my experience tells me this is the age at which elocution should be taught if the reading aloud of English women is to become a household accomplishment to instruct, console, or amuse.—*The Schoolmaster.*

Mathematical Department.

JULY EXAMINATION, 1883.

FIRST CLASS TEACHERS—GRADE C.

ELEMENTARY MECHANICS.

TIME—TWO HOURS AND A HALF.

(Five questions to constitute a full paper. Candidates are not to send up answers to more than five questions.)

1. Define the terms velocity, acceleration. Explain how a variable velocity is measured, and how that measure is expressed.

The velocity of a body falling freely receives each second an acceleration of 32 feet per second ; express this acceleration, taking the mile as unit of length and the hour as unit of time.

2. If a particle move with uniformly accelerated motion, show that its average velocity during any given time will be equal to one-half of the sum of its velocity at the beginning and its velocity at the end of the given time. Hence show that, for a uniform acceleration equal to a, $s=ut+\frac{1}{2}at^2$.

A body is projected vertically, 1st upwards, 2nd downward, with an initial velocity of 60 ft, per second. After how long an interval of time will it in each case be at a point 100 ft. below the point of projection ?

3. Enunciate—1st, the parallelogram of displacements ; 2nd, the parallelogram of velocities ; 3rd, the parallelogram of accelerations (forces).

A body is projected with a velocity of 160 feet, at an angle of 30 degrees to the horizon. How far from the point of projection will it be after an interval of 3 seconds, and what will be its velocity then ?

4. Enunciate Newton's Laws of Motion, and explain the terms rest, motion, action, and the phrase, change of motion.

Define the absolute or kinetic, and the gravitation or static units of force, and state approximately the ratio they bear to each other.

5. Briefly describe Atwood's Machine, and explain how it is used to verify the laws of motion.

Two equal masses supported by a perfectly flexible cord passing over a frictionless pulley are at rest. A mass of one ounce is placed on one of them, which descends with it 3 feet. The ounce mass is then removed, and the equal masses are found to move on with a uniform velocity of 4 ft. per second. Determine the measure of each of the equal masses. Find also the tension of the string—1st before, 2nd after, the removal of the ounce mass.

6. Assuming the parallelogram of forces, prove that if two forces whose lines of action meet in a point, be represented in relative direction by OA, OB, and in magnitude by $m.OA$, $n.OB$, their resultant will be represented in direction by OG, and in magnitude by $(m+n)OG$, the point G being taken in AB, so that $m.GA=n.GB$.

The quadrilateral $ABCD$ is held in equilibrium by forces which act along the sides AB, AD, CB, CD, and which are proportional to a, d, b, c times those sides respectively. Show that $ac=bd$.

7. Show that the algebraic sum of the moments about any point of two forces whose lines of action intersect, is equal to the moment of their resultant.

A straight rod, weighing 4 lbs. per foot of its length, balances about a point 3 ft. from one end when weighted with 48 lbs. at that end. Find the length of the rod.

SOLUTIONS TO NO. 6, BY D. F. H. WILKINS, B.A., BAC. APP. SC.

6. Let OA, OB be the sides of the $\triangle OAB$, and let the base AB be divided in G so that $m.AG=n.BG$, or $\frac{AG}{BG}=\frac{n}{m}$.

Let $OD=m.OA$, $OE=n.OB$, OF=the resultant.
Draw FZ, GH, BK each perpendicular to OD. Let $DZ=x$,

then $OK=\frac{x}{n}$ and $AH=\frac{AK.AG}{AB}$.

$$R^2=m^2OA^2+n^2OB^2-2mOAx,$$

$$AB^2=AO^2+OB^2+2AO.\frac{n}{x},$$

$$2OA.x=n(AB^2-AO^2-OB^2),$$
$$\therefore R^2=m^2.OA^2+n^2OB^2-mnAB^2+mnAO^2+mnOB^2,$$
$$=mOA^2(m+n)+nOB^2(m+n)-mnAB^2,$$
$$=(m+n)\,(m.OA^2+nOB^2)-mnAB^2,$$
$$=(m+n)^2OG^2+mnAB^2-mnAB^2, \text{ (See note.)}$$
$$=(m+n)^2OG^2.$$

NOTE. $OG^2=OA^2+AG^2-2OA.AH.$
$OB^2=OA^2+AB^2-2OA.AK.$
$\therefore\ 2OA.AH=OA^2+AG^2-OG^2,$
and $2OA.AK=OA^2+AB^2-OB^2.$
$$\therefore \frac{AH}{AK}=\frac{OA^2+AG^2-OG^2}{OA^2+AB^2-OB^2}.$$
i.e. $$\frac{AG}{AB}=\quad\text{“}\quad\text{“}\quad\text{“}$$
or $$AG.OA^2+AG.AB^2-AG.OB^2=OA^2.AB+AG^2AB-CG^2AB.$$
$$OA^2.BG+OB^2.AG-AB.AG.BG=OG^2.AB.$$

i.e., $$OA^2\frac{m}{m+n}AB+\frac{n}{m+n}OB^2.AB-\frac{mnAB^3}{(m+n)^2}=OG^2.AB.$$

$$m.OA^2+n.OB^2-\frac{mn}{m+n}AB^2=OG^2(m+n).$$

$$(m.OA^2+n.OB^2)\,(m+n)-mnAB^2=OG^2(m+n)^2.$$
$$(\text{“}+\text{“})(\text{“})=OG^2(m+n)^2+2mnAB^2.$$

6. (a) Let the forces act as in the problem; viz. along $AB=aAB$, along $AD=bAD$, along $CB=cCB$, along $CD=dCD$. Then, since there is equilibrium, the resultant of aAB, bAD must coincide in magnitude and line of action with the resultant of cCB and dCD and be opposite in direction thereto; *i.e.* the resultant of aAB and bAD coincides in direction with AB and is equal to $(a+b)AE$; and the resultant of cCB and dCD is equal to $(c+d)CE$,

$$\therefore \frac{BE}{ED}=\frac{d}{a}=\frac{c}{b}, \text{ or } bd=ac.$$

The rest of the paper does not present any special difficulty.

DECEMBER EXAMINATION, 1883.

ADMISSION TO HIGH SCHOOLS.

ARITHMETIC.

(Ten marks for each question.)

Multiply the *sum* of fifty-nine thousand four hundred and four, and forty-seven thousand six hundred and seventy-five by their *difference*, and divide the product by $7\times13\times19$.

2. Bought oranges at the rate of 10 cents the dozen, and sold them at the rate of five oranges for 11 cents. How much did I gain on eleven boxes, each containing 20 dozen?

3. A man bought a rectangular field 40 rods long by 25 rods wide, paying therefor at the rate of $300 per acre, and then had it fenced at the rate of $1.50 per rod. Prove that the land cost him exactly ten times as much as the fence.

4. Divide $1200 among A, B, and C, so that A may have $70 more than B, and twice as much as C.

5. Divide the sum of $\frac{2}{5}$ of $8\frac{1}{3}$ and $2\frac{1}{7}$ of $5\frac{3}{8}$ by the difference between $\frac{3}{7}$ of $3\frac{1}{2}$ and $\frac{1}{2}$ of $\frac{1}{3}$ of $2\frac{2}{3}$.

6. Add together 1·302, 3·2589, and 40·93. Multiply the sum by ·00297 and divide the product by 90·09. (*Decimals, not vulgar fractions, to be used in doing the work, otherwise no marks to be allowed.*)

7. A farmer sold a load of hay at $16.25 per ton; the whole weight of waggon and hay was 2875 lbs.; the waggon alone was found to weigh 1083 lbs. How much did the farmer receive for his hay?

8. A can run a mile in 5 minutes, B can run it in 6 minutes. How many yards start should A allow B in order to make their chances equal?

9. Three men can dig a certain drain in 8 days. They work at it for 5 days, when one of them falls ill, and the other two finish the work in 5 days more. How much of the work did the first man do before he fell ill?

10. Find the interest on $275.80 for 91 days at 7 per cent. per annum.

JULY EXAMINATION, 1883.

INTERMEDIATE AND THIRD CLASS.

ALGEBRA SOLUTIONS.

(See September number.)

1. (1) Dividend is of four dimensions, divisor of three.
$\therefore$ Quotient must be of one dimension, and from the symmetry the only such quantity is $a+b+c$.
$\therefore$ Dividend$=k(a+b+c)\,(a-b)\,(b-c)\,(c-a)$ where k is the numerical factor.
Putting $a=0$, $b=1$, $c=2$, we find $k=1$.
$\therefore$ $a+b+c$ is the quotient.

(2) Transforming dividend, we have—

$$\frac{1}{xy^2}+\frac{1}{x^3}-\frac{1}{y^3}-\frac{1}{x^2y}=\left(\frac{1}{x^3}-\frac{1}{y^3}\right)-\frac{1}{xy}\left(\frac{1}{x}-\frac{1}{y}\right)=\left(\frac{1}{x}-\frac{1}{y}\right)\left(\frac{1}{x^2}+\frac{1}{y^2}\right)$$

$\therefore$ $\frac{1}{x^2}+\frac{1}{y^2}$ is the required quotient.

2. We must have $x^3+ax^2+bx+c=k(x-1)\,(x-2)\,(x-3)$ where k is merely a numerical quantity. If we assume $k=1$, we must have
x^3+ax^2+bx+c identical with $x^3-6x^2+11x-6$,
i.e. $a=-6$, $b=12$, $c=-6$. If k is not $=1$, then
$a=-6k$, $b=12k$, $c=-6k$, whatever be the value of k.

3. (1)
$$\begin{array}{r} A=\ 3-\ 4+0+0+1 \\ B=\ 4-\ 5-1+1+1 \\ \hline B-A=\ 1-\ 1-1+1\ \ =C, \text{ say.} \end{array}$$
$$\begin{array}{r} 4A=12-16+0+0+4 \\ 3B=12-15-3+3+3 \\ \hline 3B-4A=\quad\ 1-3+3-1=D, \text{ say.} \end{array}$$
$$C+D=2(1-2+1)$$
$$C-D=2(1-2+1) \qquad \therefore\ x^2-2x+1=\text{H.C.F.}$$

(2) For $2x$ write a, b for y, and c for $3z$,
and we have $a^3-b^3+c^3+3abc$ and $a^2-b^2+c^2+2ac$,
i.e. $(a-b+c)\,(a^2+b^2+c^3-ab-bc+ca)$ and $(a-b+c)\,(a+b+c)$,
$\therefore$ $a-b+c$, *i.e.* $2x-y+3z=\text{H.C.F.}$

4. (1) Transforming we have

$$\frac{4x^2-y^2}{y^2}\cdot\frac{y}{2x-y}+\frac{8x^3-y^3}{y^3}\cdot\frac{-y^2}{4x^2+2xy+y^2},$$

i.e. $$\frac{2x+y}{y}-\frac{2x-y}{y}=2.$$

(2) Numerator $=(x+b)\,(x^2+ax+1)$
Denominator$=(bx+1)\,(x^2+ax+1)$
Fraction $=\frac{x+b}{bx+1}$.

5. Given fraction$=\frac{(a+b)\,(c+d)}{x-3c+2d}$.

Now if $x-3c+2d=c+d$, *i.e.*, if $x=4c-d$, then all the factors involving c and d cancel out.

6. (1) Given $a+b+c=0$, Multiply through by $\frac{2}{abc}$,

and $\frac{2}{ab}+\frac{2}{ac}+\frac{2}{ca}=0$, Add $\frac{1}{a^2}+\frac{1}{b^2}+\frac{1}{c^2}$ to each side,

and $$\frac{1}{a^2}+\frac{1}{b^2}+\frac{1}{c^2}=\left(\frac{1}{a^2}+\frac{1}{b^2}+\frac{1}{c^2}\right)^2.$$

(2) $x=a^2+b^2+c^2$,
$y=ab+bc+ca$,
$\therefore (x-y)^2=(a^2+b^2+c^2-ab-bc-ca)^2$,
and $(x+2y)=(a+b+c)^2$.
Multiplying $x^3+2y^3-3xy^2=(a^3+b^3+c^3-3abc)^2$.

(3) $2x=y+z$, $2b=z+x$, $2c=x+y$ | Also $4a^2=(y+z)^2$, $4b^2=(z+x)^2$, $4c^2=(x+y)^2$

$\therefore\ a+b+c=x+y+z$; $2(a^2+b^2+c^2)=(x^2+y^2+z^2+xy+yz+zx)$.

Thus $(a+b+c)^2-2(a+b+c)(a^2+b^2+c^2)$ becomes
$(x+y+z)^3-(x+y+z)(x^2+y^2+z^2+xy+yz+zx)$,
or $(x+y+z)\{(x+y+z)^2-(x^2+y^2+z^2+xy+yz+zx)\}$,
i.e. $(x+y+z)(xy+yz+zx)$.

7. $\frac{(a+b)(a+c)}{a+b+c}$ and $\frac{(a+c)(a+d)}{a+c+d}$ are equal
if $a+b=a+d$, and $a+b+c=a+c+d$, *i.e.* if $b=d$.

8. (1) Transpose and square, and
$(x+3)-10\sqrt{(x+3)}+25=x+2$,
$\therefore\ 5\sqrt{(x+3)}=13,\quad x=2\frac{44}{25}$.

N.B.—It is not however certain without trial that this is the true root. The reader may put $2\frac{44}{25}$ for x in the given equation and verify the result. If not the root of the given equation it is the root of the equation $\sqrt{(x+3)}-\sqrt{(x+2)}=5$. The ambiguity arises from the squaring. Both $-\sqrt{(x+2)}$ and $\sqrt{(x+2)}$ give $x+2$ when squared.

(2) $x=\frac{3}{4}$.

(3) We have $x(c+d)+(a+b)(c+d)=x(a+b)+(a+b)(c+d)$
or $x(c+d)=x(a+b)$.
And as $c+d$ is not $=a+b$, x must $=0$ or ∞.

9. If x and $x+3$ be the sides, then
Area$=\frac{1}{2}x(x+3)=18$; $x^2+3x-36=0$, &c.

10. Let x = dist. of exit pipe from bot., $\therefore h-x$ = ditto from top.
" y = time required to fill one pipe only.
Hence $\frac{h}{y}$ = depth filled in 1 unit of time by 1 pipe,
and $\frac{5h}{6y}$ = " " emptied " " " ;
$\therefore\ \frac{h}{6y}$ = " filled " " " 2 pipes.

Now $x\div\frac{h}{y}$ = time req'd to fill first x units of depth $=\frac{xy}{h}$;
and $(h-x)\div\frac{h}{6y}$ = " " rem. $(h-x)$ " $=\frac{6y(h-x)}{h}$.
$\therefore\ \frac{xy+6y(h-x)}{h}$ = whole time when both pipes run $=2y$,
$\therefore\ x=\frac{4}{5}h$.

Verification.—If second pipe fills h feet deep in 5 hours, say,
then " $\frac{4}{5}h$ " 4 "
The remaining $\frac{h}{5}$ feet will be filled only $\frac{1}{6}$ as fast as before, and will therefore require 6 hours instead of 1 hour. $6+4=2(5)$.

NOTE.—In actual practice the velocity of the outflow would be proportional to the square of the depth, so that as the vessel filled the first pipe would take out more and more per second. In this problem however the inflow is supposed to increase in exactly the same ratio so that the proportion remains constant.

Sing on! we sing in glorious weather,
Fall one step over the tiny strand;
So narrow, in sooth, that still together,
On either brink we go hand in hand.—*Jean Ingelow.*

Ah! have you yet to learn that the eye altering alters all; "that the world is an echo which returns to each of us what we say?"

Wit is a magnet to find wit, and character to find character.—*Emerson.*

A wise man in our time caused to be written on his tomb, "Think on living." That inscription describes a progress in opinion. Cease from this ante-dating of your experience. Sufficient to-day are the duties of to-day.—*Emerson.*

Don't waste life in doubts and fears; spend yourself on the work before you, well assured that the right performance of this hour's duties will be he best preparation for the hours of age that follow it.—*Emerson.*

Special Articles.

NOTES OF TALKS ON TEACHING.*

TALK I.—PRELIMINARY.

I shall try in these lessons to help you learn more of the great art of teaching. We have come from widely different sections, and are, for the most part, strangers to each other, and may find it a little difficult at first to draw together. But a common interest will unite us in the bonds of sympathy and good-fellowship. We have all seen teachers who were so self-satisfied that they seemed—to their own minds—to have rounded the circle of teaching, made the circuit of knowledge and skill complete, and closed their minds against the entrance of all further impressions. Such can never learn till the barriers of conceit behind which they have intrenched themselves are broken down. There are others, the opposite of those just described, who stand like empty pitchers waiting to be filled; they accept any and all methods which are popular, or have some show of authority. Such teachers are imitators merely, and will change when any novelty is brought to their notice. No one was ever great by imitation; imitative power never leads up to creative power. Just here let me say that I shall object quite as strongly to your taking the methods which I may present, unquestioned, as I should to your acceptance of others in which I do not believe.

Again, there are teachers who have some good ways, but who are so prejudiced that they have no regard for anything outside their own work; they cling to the old, have a ready-made objection to the new, and have ceased to examine. Facts are the eyes through which we see laws. There is no better founded pedagogical rule than that the facts must be known before generalizations can be. It follows, then, logically, first, that we cannot know which is the best without knowing both; second, that we cannot know which is the best without knowing all; and, third, that we cannot know any method without knowing the principles which the method applies. Finally, no one can fairly judge a method by seeing it in operation once or twice, because the application may not be correct, and that cannot be judged unless the foundation principles are known.

The great difficulty in the way is, that teachers are not willing to pay the price of genuine success—that is, untiring study in the most economical directions—hard labor. The demand for good teaching was never so great as now, and no matter where you are, if your work is good it will attract attention.

I have been often asked to explain the so-called Quincy system. So far as I have been able to understand this system, it does not consist of methods with certain fixed details, but rather presents the art of teaching as the greatest art in all the world; and because it is the greatest art, demands two things: first, an honest, earnest investigation of the truth as found in the learning mind and the subjects taught; and, second, the courageous application of the truth when found. In the talks which follow, the only real substantial help I can give you is to aid you in such investigation All the truths that you may learn must be discovered by yourselves. In this way alone truth is made a living power. Nothing is farther from my present purpose than to have you take what I shall say without the most careful scrutiny. The great mass of teachers simply follow tradition, without questioning whether it be right or wrong, and it requires very little mental action to glide in the ruts of old ways.

The work of the next hundred years will be to break away from traditional forms and come back to natural methods.

Every act has a motive, and it is the motive which colors, directs, forms the action. Consequently, if we would understand the edu-

* Notes of Talks on Teaching, given by Francis W. Parker, at the Martha's Vineyard Summer Institute, July 17 to August 19, 1882.

cational work of to-day, we must know its motive, bearing in mind the fact that due allowance must be made for the stupefying effects of long-established usage. The motive commonly held up is the acquisition of a certain degree of skill and an amount of knowledge. The quantity of skill and knowledge is generally fixed by courses of study and the conventional examinations. This is a mistake. In contrast with this false motive of education, to wit, the gaining of skill and knowledge. I place what I firmly believe to be the true motive of all education, which is the harmonious development of the human being, body, mind, and soul. This truth has come to us gradually and in fragments from the great teachers and thinkers of the past. It was two hundred years ago that Comenius said, "Let things that have to be done be learned by doing them." Following this, but broader and deeper in its significance, came Pestalozzi's declaration, "Education is the generation of power." Last of all, summing up the wisdom of those who had preceded him, and embodying it in one grand principle, Froebel announced the true end and aim of all our work—the harmonious growth of the whole being. This is the central point. Every act, thought, plan, method, and question should lead to this. Knowledge and skill are simply the means and not the end, and these are to work toward the symmetrical upbuilding of the whole being. Another name for this symmetrical upbuilding is character, which should be the end and aim of all education. There are two factors in this process: first, the inborn, inherited powers of the mind, and, second, the environment of the mind, which embraces, so far as the teacher is concerned, the subjects taught. The subjects taught then, are the means of mental development. To aid in the mind's development the teacher must know, first, the means of mental and moral growth, which are found in the subjects taught; and, second, the mental laws by which alone these means can be applied. Knowing the mind and the means, he can work toward the end, which is growth. Method is the adaptation of means of growth to mind to be developed, and natural method is the *exact* adaptation of means of growth to mind to be developed. To acquire a knowledge of the mind and of the means by which the mind may be developed is the study of a lifetime. Let us stand with humility before immensity.

In the beginning, then, the study of methods aside from principles is of little use; therefore, that investigation should lead to a knowledge of principles is all-important. There are two lines of investigation: the direct one is the study of mental laws, or the investigation of the facts out of which the generalization of principles is made. The second, and indirect way, is the study of the application of methods in detail, in order to discover through such details the principles from which they spring. Let no teacher rest satisfied with a study of the mere details of methods, but use them as illustrating the leading back to principles.

TECHNICAL SKILL.

In order to train children how to do, we must be able to do ourselves; hence the great importance of that preparation on the part of a teacher which will result in skill in the technics of school work. First of all, the voice should be trained, for a clear musical voice is one of the teacher's most potent qualifications for success, and cannot be overrated. Drill in phonics is necessary, not only to gain the ability to give the slow pronunciation with ease and with natural inflections, but as an aid to perfect articulation and pronunciation. That every teacher should be an expressive reader is self-evident, but it might not occur to all that to be an eloquent talker is also one of the requisites demanded by the New Methods. Faults of tone, modulation, and manner are propagated by the teacher, as well as false syntax and incorrect pronunciation. Then, too, every teacher should be able to sing, and sing well. Music fills the air with beauty, and in the school-room everything should be quiet and musical, with never a harsh note. Failing in this the school lacks harmony. Writing is the second great means of language expression, and should follow immediately upon talking. A teacher who cannot write well, cannot teach writing well; for the copy on the blackboard should be well nigh perfect. Skill is the expression of power, and drawing is the second best way of expressing thought. Given the skill to draw, and a teacher is never helpless, for then he can teach, even if everything else is taken away. Besides, I see a future in drawing which I see in nothing else in the way of developing the mental powers; hence the demands made upon teachers for knowledge and skill in this art must increase with every year. Moulding in sand is one of the best possible ways to teach geography, and should precede map drawing. Moulding in clay is a valuable means of form teaching, and is also the best of preparations for drawing. Last of all, gymnastics—the training of the whole body—is of the utmost importance, not only to insure symmetrical physical development but to aid in the establishment of good order. Mental action, as you know, depends largely upon physical conditions, and therefore we should train the body that the mind may act. Believing that the skill of the teacher in these directions measures in a great degree his power to do good work, I have endeavored in this course of lessons to provide you with the best of teachers for these different departments. Now, a word of caution: time and strength are both limited, therefore don't try too much; but that you may become experts in these technical matters, let me add, whatever you do try, be sure to follow it up.

(To be continued.)

MUSIC IN THE PUBLIC SCHOOLS.

A PRACTICAL ILLUSTRATION, BEFORE TORONTO TEACHERS' ASSOCIATION, BY DR. CLARKE.

In the work of public school education, musical instruction should be imparted by the teacher of each department, through all grades, as in the classification of all other studies.

At first thought, with the present generation of teachers who have not been thus educated, this method may seem an impossibility, but it may be accomplished by the teachers now in office, if done under proper supervision.

Upon the supposition that in the cities and larger towns, the period of school-life extends from the age of six to sixteen years, there are ten years given for an orderly and systematic course for the study of the fundamental principles of musical science, and the practice of vocal training, without its becoming irksome, or taking much time for the more essential studies.

This musical instruction should be so graded in its progress, that the year's work in each department will be a repetition of the routine for the same teacher, with each new allotment of pupils, as they ascend from the preceding grade.

It is well known that many people play musical instruments from notes, who have no idea of the sounds represented, unless they are touched upon the instrument; when the sense of the relationship of the different tones should be so impressed upon the mental faculties, that the sounds should be as distinctly heard by the mind, as when a book is read without the sound of the voice being heard by the external ear.

The cultivation of the faculty of listening, renders more acute the means of receiving instruction, as it causes the powers of observation to become more intense.

The foundation for the cultivation of the musical perception, or

the faculty of hearing, commonly called "the ear for music," should be formed and developed in the primary grades, without the use of technical terms, based upon the simple relative tones of the different intervals of the scale, through innumerable varieties of interesting exercises which will absorb the attention of the little ones, so that they will be taught objectively, in such a manner that their perception of the various degrees of the height, depth of pitch, and quality of tones, will be involuntarily acquired.

The chief portion of the first instruction of the youngest grades should be accomplished, in their being taught to sing properly by memory, a large variety of pleasing songs adapted to their mental comprehension, in which they will become deeply interested, and the school-hours made more attractive.

All the religious and moral virtues may be inculcated through their little songs. The sentiment should be about their kind teachers, the pleasures of knowledge, the beautiful flowers, the gentle animals, the use of their dolls, kites, and all their happy and healthful recreations,—and such subjects which will tend to give animation to the objective world around them, and especially such themes which inculcate the life of unselfishness, through good examples of children's poetry allied to correct models of simple music, which will aid in forming their artistic taste in after years. There should be much singing in this department to relieve the hours which are often so wearisome to both pupils and teachers. These hours of incipient school-days should be made the happiest, as an incentive to the attainments of succeeding education, and as the stern realities of life in due time must be met, the first school-days should be surrounded with every pleasant association which may be looked back upon as a vision of happy innocence. The task of the primary school teacher is one of the most laborious, and music should be made one of her chief assistants.

In the next grades above the primaries, the scholars should be provided with music blank-books, and their instructive exercises after having been written upon the black-board, should be recorded in their order, and sung from their own writing, and not from memory as in the primary grades.

From the instruction imparted, their songs should first be written upon the board as exercises, and then be copied in their exercise-books, and all the songs sung by each grade should be within the compass of the work assigned to each grade up to the highest.

Until scholars have acquired a knowledge of the simple elements of addition, substraction, multiplication, and division, intricate exercises in rhythmical form should not be introduced to perplex and discourage them.

The studies in each succeeding grade will carry the pupils through part-singing in all the keys, introducing all the forms of vocal music up to the age when the voices of the boys undergo that change which causes them to take the octave below their original pitch, and their instruction must then carefully be put in practice, so that there shall be only beneficial results.

By the time the pupils enter the high school they will be prepared to undertake the knowledge of the elements of harmony, and the general understanding of musical science.

All this progress may be accomplished through the regular school years by simply devoting ten or fifteen minutes daily to this cultivation, without making a hobby of music, and without robbing the other studies of their required time, and this desideratum may be attained with hearty co-operation on the part of all the pupils, boys as well as girls.

The musical instruction should be given in the prevailing form of notation, in which the great treasures of musical thought have been written and preserved in the system of the five lines and their spaces, so that all the instruction given will enable the pupils to readily understand any musical instrument which they may choose to learn. All this work may be accomplished by the regularly employed teacher of the room, even if he or she has not previously been a teacher of school-music, if guided by intelligent superintendence. It logically follows that teachers of a succeeding generation who have been systematically educated through such an orderly course of instruction will be able to accomplish the desired results; but the subject to be considered is—how to accomplish the work with the talent now employed in the common schools?

It is proposed in this illustrative exercise to exhibit how some of the elements of the fundamental work may be imparted to young pupils by a teacher who has not hitherto given musical instruction, and who has not sung, supposing the method of instruction having been laid out in proper form by the one whose duty is to give the instruction to the teachers and then make regular visits of inspection.

The first thing to be accomplished is the awakening of the musical perceptions, or the developing of a knowledge of the different tones in their relation to each other, of which there will be only time enough to-day to present two or three, bearing in mind that the tones of the scale are not all to be taught at once, but that they are to be added in such a degree of slowness that the pupil cannot fail to learn them all in the proper time assigned for their accomplishment. In the imitation of musical tones, the object must not be power, or noise, but a quality of tone in which the muscles of the throat should be relaxed. This must be taught by imitation, and not by explanation. Children are apt to sing in that unpleasant nasal quality which must be avoided at the beginning.

After illustrating this unpleasant quality of tone, the lecturer proceeded to teach a class of primary scholars, by exhibiting the first steps to be taken in awakening the musical perceptions in children, ending with an example of teaching a school song to the little ones, by a pleasing way of memorizing.

TRAINING THAT EDUCATES.

AN ADDRESS DELIVERED NOVEMBER 18TH, 1882, AT LANCASTER, PA. BY COL. F. W. PARKER.

Night before last I heard at regular intervals the hammer of the tester on the iron wheels, trying them to see if all was right and the train could safely move on to the terminus of the line. I think it is well for us to test the wheels of the car of progress in the same way, to see in what condition we are, and whether we can move on safely toward the future.

Our forefathers founded this republic upon the basis of a common school for every child. The scheme was grand in conception, because new. It had never been tried before, and has never been tried in the same way since, except among us. The boasted schools of Germany—as good as our own—are not free in our sense of the word. They are stratified according to the gradations of society, and are intended and constructed for the foundations of monarchy. Our free schools, where the children of all classes are brought together on one level of equality, are the proper foundations for republican institutions. Only where the organic life of a people flows freely from the lowest to the highest is there a true free school; and our fathers builded "better than they knew," when they laid this grandest foundation of free government.

The reformer who decries or ignores the past makes a mistake. Only by inheritance have we the wherewithal to build. There is a true conservatism which takes what the past has created, and on it builds the future—it is false and spurious conservatism that holds fast to whatever is old *because* it is old, and consequently fails to grow.

Now, our schools demand that their 300,000 teachers shall be trained, skilful workers. Where shall such be found? Suppose that to-day there should be a popular demand for a scientific road-builder in every township, how would it be met? Why, there would not be enough competent men in the whole country to supply one state. So it has been with the schools; trained teachers could not be found and we were obliged to take them untrained; and noble work these honest-hearted workers have done.

The normal school plan was a progressive step, in that by it the state recognized a science of teaching; but the conditions were very limited. The pupils of necessity had to be taken largely as they came up from the common schools; their academic qualifications were poor, and the normal schools were obliged to spend the time upon the common branches, which should have been given to scientific training; and so the pupil is not much more than prepared to receive the philosophy of education when he leaves the normal school to become a teacher. I have seen normal teachers who responded to criticism or suggestion with that smile of supe-

riority which is so blighting to a modest man, and which told of their confidence in their ability to cover the whole ground of any given subject, and put it in a diagram form on the blackboard in fifteen minutes. There are such teachers and such normal schools: schools which develop a self-confidence and self-conceit that simply puts a barrier between the teacher and knowledge by making him believe that he knows everything. But the best outcome of the true normal school should be the attitude of its pupils toward knowledge—an attitude of humility before the grave responsibilities of a teacher—a spirit that says, "I *don't* know, but I *want* to know," and with steady work, and prayer to God, and realization of immortal destinies committed to their care, "work out their own salvation with fear and trembling." The normal school which develops such a spirit is doing a grand work; but if, instead, it fosters self-conceit, its pupils are injured irreparably.

There is a marked line all along the course of history between those who followed tradition and those who followed science. The history of medicine is a marked illustration. Before the time of Harvey, there was only tradition, and medicine was mere empiricism—it was "hit or miss," chiefly miss—but after the discovery of the circulation of the blood, scientific methods were evolved with the grandest results. In other directions the same progress has followed the introduction of scientific methods. In the last forty years, thought concretely expressed in machinery, has revolutionized the world. Now you ask, why has not the application of the science of teaching produced like changes in our schools; for that it has not, will be generally conceded. I will not stop to argue that there *is* a science of the development of thought. Of course we do not claim that it is an *exact* science—all the mental laws have not been discovered; this, however, is true of every science—none is complete.

I have not time to quarrel with those who say there is no more than a philosophy of teaching. But there are certainly some principles upon which we all agree who have given thought to the subject. What changes would be brought about by the application of these principles, and the consequent change from traditional to scientific methods? Is it not fair to expect that they would be analogous to the progress of civilization in other directions?—analogous, not identical; for we cannot expect results so quickly. Why? Because when an Edison or a Howe, by years of study, has perfected a mechanical invention, it is at once ready for everybody's use; but with teaching it is different—the science must be discovered by each individual teacher who is to apply it, so that instead of one Howe or Edison, we must have a host of great inventors. It is not strange, then, that our progress is slow; and when all is considered, we have done well. But what of the future? Let us apply a test or two.

We will take a principle upon which we are all agreed—one that was formulated by old Comenius—"Things that have to be done should be learned by doing them." In the mechanical world the principle is applied. We do not keep an apprentice studying the theory of shoemaking or house-building for the whole term, and then send him out to make shoes or build houses—he learns to do things by doing them; but how is it in the schools? Why, we have been forty years inventing ways to have children learn to do one thing by doing something else? Do you think I exaggerate? Let us see.

In teaching arithmetic, we teach not the science of numbers, but figures. Go into any average school and ask to be shown a number, and the child will go to the board and write a figure; ask for a fraction, and he will write "½"—which is no more a fraction than the word "hat" is a hat. We teach figures, and the bright children apply them to numbers. I have given to pupils who had been nine years in school this example:

I have a cord of wood, sticks four feet long, to be cut into three lengths for a stove, for which I pay $2; if I want another cord cut into four lengths, how much proportionately should I pay?

And they with edifying unanimity answered $2.66⅔ which is wrong, of course. If I pay two dolllars for two cuts, three cuts are worth three dollars; but the children *didn't think*—they used figures.

Then we teach what we call English grammar. Now there is such a thing as Greek grammar, and Latin grammar, and German grammar; but there is no science of the English language worth mentioning (since William the Conqueror smashed the Saxon), and what there is can be taught to a high school pupil in a week or two. But some man unfortunately tried to make an English grammar on the Latin plan; and ever since they have been making it more and more complicated, and we have gone on teaching what is called English grammar, and pretend to teach the child to "speak and write the English language correctly"—we all know how it does it. Here again directors are paying millions to teach children to do one thing by doing something else. What shall we do about it? Why, apply our principle: Let the child learn to talk by talking, and to write by writing, and to compose by composing—that is all.

The great object of the schools should be to train their pupils for work—real work; and you can't do this by trying to learn one thing by doing something else—there is no life in that, and your scholars become dull, and you try to stimulate them by emulation, and don't succeed any better than the man who tried to feed his horse on sawdust. The outcome of your artificial methods is a class of young people who are beneath—not above—manual labor, and are chiefly anxious to find places where there is not much work. Why? Because you never taught them to love work—you made work drudgery. Try the other plan. Set them to doing real things and see what life, and soul, and energy, and power there will be in your school-room.

The crying want of the time is men and women who can *do*. Daily there come to my desk applications for teachers, principals, superintendents, offering large salaries—and I cannot fill them. The great railroads find the same difficulty in filling responsible places. Why? Because our youth are fed on unsubstantial seeming instead of real things, and have never been taught to work. We have all seen the young man come from college clothed in all the panoply of words, and at the first spear-thrust of reality the armor falls away and leaves him naked before the world.

Now, the science of teaching regards the school as a workshop where the child shall be trained to work, to *love* work, to work systematically and intelligently; so that whether he manages a railroad, or builds a house, or saws off the limb of a tree, he works with brain as well as hand. Is not that "practical?" Try it, gentlemen directors, and see the results.

Pestalozzi, whose name has become immortal, was not a highly educated man, but he discovered a mighty secret. Dissatisfied with the social and moral aspects of his country, and finding that the sword promised no remedy, he went to the root of the matter, and found it in the faulty education of the children. They went to school and learned the catechism, and recited words out of books, and that was all. Then he wrought out this great discovery—"*Things must come before words—thoughts must come from live things.*" By this discovery he did more for Europe than any other single man simply by teaching children to use their eyes.

Have we profited by that discovery? Do you always teach *things* before *words*? Suppose when you open your school next Monday morning, you write that one sentence, "Things must come before words," on your blackboard; try not to violate it for one day. If you succeed, you will seem to have passed by one great leap into a better world; you will be happy men and women, your pupils will be happy children.

"Things before words—facts before generalizations." How are

these principles recognized by the text-books? We open a geography, and in the very first sentence we find a definition— a generalization; and so it goes on, page at a time. The child learns all this—learns the words, and works his jaws in repeating them, and they mean nothing whatever to him—happily Providence has ordained that he may forget them easily. Before he can reach those definitions understandingly, a long process must be gone through, but the *book* gives the definition first. I went into a school one day and put the question—"Children, did you ever see a peninsula? No, they had never seen one—seemed to think it unreasonable to ask them, as if one ought to be about a hundred years old to see such a wonderful sight—and yet four-fifths of them were born on the beautiful peninsula where the school-house stood.

So directors are paying their money for the teaching of mere empty words, that pretend to describe things, when we ought to show our children the things themselves. We teach in this way simply because it is the traditional method—like the man who carried his grain in one end of the bag and a stone in the other to balance it, because his father and grandfather had done it, and what was good enough for them was good enough for him, and he "guessed he knew his own business, and nobody should teach him to carry grain to mill."

Another principle: *The mind grows by its own activity, and in no other way.* We can only assist; we cannot make it grow. How do we recognize this fact in our schools? I remember when I was a young teacher how I used to explain everything and how I explained most what I knew least. I used to explain divisions of fractions very lucidly when I didn't understand it—and I never did understand it until I learned with actual things. All this explanation is simply depriving the child of his chances to grow. The best expression of mental activity is when the child says "Don't do that for me—let *me* do it." The more we pour in, the weaker they become. What we want is to develop power—yet we do their work while they sit helpless. Would you train an athlete by lifting all his burdens for him, and then send him forth to win the race? Why do the same thing for the child's mind? You now understand why I say that the only true arithmetic would be one that should have neither rule, explanation nor definition in it.

The thing that is near is the thing to teach. You sometimes hear a teacher complaining that she can do little or nothing because she has no apparatus. This is another of the chains of the old education. Have we not pebbles, and shells, and leaves, and flowers, and free skies? If there is absolutely no apparatus, save the ordinary country surroundings, these are enough for the true teacher. The good teacher is the one who appreciates the value and feels the power of the *near*; for out of the seen the unseen must come. To be sure, some will say, "We are opposed to this—these new-fangled ways are all bosh." Yet they ride in the cars and have the electric light before their doors; they are progresssve in that line of applied science; but they fail to perceive that the science of teaching applied would produce commensurate results. They say, "Those things are practical, but these educational theories are visionary." Yet the things of which we are most ignorant, as regards the teaching in our schools, are, the air we breathe, the water we drink, the food we eat, the clothes we wear—in short, that which touches us most closely on every side. The true teacher, the one who is trying to learn to teach, uses these things; and the thought of God in nature becomes the thought of the child—and the revelation of God in nature works out through the child a true civilization.

Work can be made attractive. For great success, the worker must *love* his work; it must not be drudgery to him. Give the child real things, and he will love to work, and you will not need the rattan and the ferule, nor the compulsory truant law, nor yet undue stimulus of emulation. I do not believe in compelling children to go to school, unless you have something good and pleasant there for them; and if you have that, the attraction makes compulsion unnecessary. I have to deal with some of the poorest children to be found anywhere; yet in the very slums of ignorance and poverty and superstition they made me welcome; the children are all our friends because they know we bring them good. And this is the glory of our work that we are trying to make of these children, notwithstanding such surroundings, men who will be an honor to the republic—voters who cannot be bought for two dollars apiece.

And we are doing it! I tell you, teachers, that real teaching eliminates the bad boys and girls—they are good. Under such teaching, goodness takes the place of vice—all good teaching develops moral character. On the other hand, all bad teaching has an element of immorality in it; we have seen that it unfits for work, and idleness means vice. I believe that the teaching of the lowest primary schools, if well done, is the highest work on earth.

And now, teachers, shall we not begin to do well, and apply these principles to our work? If we and our successors would do this, in a century there would be a revolution in the intellectual and moral world greater and more beneficent than the physical one of which we have spoken. Shall we not do it? The work cannot be done quickly, but we can do our share in laying the foundations of a glorious future.

What are the chief obstacles in the way of reform? I believe that there is no class more earnest and faithful than teachers; and from what I have seen in your state, I am not sure but Pennsylvania teachers lead the van; but my clients are the children, and through them the future of the Republic, and in their interest I must speak the whole truth—and the truth is, teachers, that *the greatest obstacle is in us.* By our clinging to tradition, and our self-conceit, we too often bar knowledge out of our minds. We should pray against the tendency to hold on to worn out devices, and for humility to feel that life is too short to learn all about teaching. If you would go into the schools next Monday with such a spirit, work from fact to theory, and from theory back to practice, what growth would follow! But too often our attitude toward knowledge is wrong—we think we know, when we don't.

Sometimes the superintendent is an obstacle. When he comes to examine he must have just so much—it is all measured off—he comes, asks the regular questions, they are answered, and he goes away, and it is all right. Now any examination that does not test real teaching, or does not help the teacher with the children, is worse than none. I know how difficult it is to find men and women fit to supervise schools; they must know how to teach—how to *show* the teacher what to do—how to put the standard within reach of honest work, but beyond that of stuffing or cramming.

Directors often stand in the way of progress—they, too, think they know when they don't. My friend C. F. Adams, a man of fair education and pretty good family, made quite a discovery when he found himself unfit to supervise schools—many never find it out. I have known directors who had once taught two or three months, and knew all about it. They are the kind that come in every now and then to examine the schools, they always ask the same questions, and after the first time they are always answered; and when the superintendent comes round, and thinks the teacher below the mark, he says: "Oh, no! why, the pupils answer every question I ask them!" Such people may know a good deal about business, but when they can diagnose and prescribe for a case of typhoid fever without special education, then I would trust them to examine and grade teachers—and not before. We had some bitter experience of this kind when the civil authorities undertook to manage the war. There is only one sensible way for directors to treat this matter; find a man or woman who knows the business, give him the teachers he wants and the means he needs—and if he don't get results, turn him out, and find one who will get them.

But sometimes it seems as if the schools were made for the teachers, and not for the children—and we find all the places filled by the directors' "sisters, and their cousins and their aunts." These same gentlemen, if they wanted a superintendent for a factory, would send to Europe, if necessary, to get a competent man; but when it is a question of trusting to somebody the development of our children, the selection is made because some young girl finds it convenient to make five or six dollars a week.

The people themselves stand in the way, then they fail to elect proper persons as superintendents and directors, and carry their offices into politics. Now, if you must have corrupt congressmen, and legislators, and governors yet awhile, I suppose we can't hinder you; but, for heaven's sake, keep the interest of our little children from contact with dirty politics! When you help to elect unfit school officers you vote against your own children, and help to perpetuate evil for generations.

And now, teachers, I must leave you, but my last word is, pray and work, that you may understand the great art of teaching; have courage to apply all you know, being always ready to learn better; take advice; profit by criticism; say what you think. Magnify your office. I am a teacher to-day for the same reason that I was a soldier twenty years back—because I believe that the problem of the education of the people is the greatest problem of the time. Learn all you can, and teach it to the little ones, and you and they will be happy.

Promotion Examinations.

GEOGRAPHY.

GRADE VI.

1. Define, giving an example where possible—Frigid, Estuary, Cancer, Empire, Colony.
2. Name the bays and gulfs on the eastern shore of North America.
3. In what county and on what line of railway are the following situated—Chatham, Guelph, Pembroke, Brampton, Walkerton, Winnipeg, Brockville?
4. Name the rivers of New Brunswick, the cities of Ontario, and the islands of British Columbia.
5. Outline a map of Lake Ontario and place in proper position St. Catharines, Hamilton, River Credit, Whitby, Cobourg, Picton, Amherst.
6. Name the political divisions of Europe and give the capital of each.
7. What and where are—Wolfe, Madawaska, Sault Ste. Marie, St. Joseph, Honduras, Cascade, Peace, Zealand, San Francisco, Liffey?

HISTORY.

1. Name the nations that ruled England before the Norman Conquest. From which of these did it derive its name?
2. Write short notes on—Senate, Executive, Act of Parliament, House of Commons, Lieutenant-Governor.
3. For what are the reigns of the following kings noted? Give dates where you can—Ethelred, Harold II., William I., John, Henry V.
4. Assign events to following dates—827, 1282, 1296, 1314, 1415.
5. Write brief notes on—Simon de Montfort, Domesday Book, Crecy, John Wycliffe, The Barons' War.
6. What is meant by Responsible Government and when was it introduced into Ontario and Quebec respectively?
7. Relate some facts concerning La Salle, Clergy Reserves, Dr. Ryerson, Lord Dufferin, Confederation, giving dates where you can.

ENGLISH LITERATURE.

(*Pupils will open books at page 44.*)

1. Explain in your own words—'the coal measures of our own country,' 'sinews of commercial prosperity,' 'fifty-eight successive beds.'
2. Give the meaning of—destitute, area, deposits, maritime, conspicuous, aquatic, geologist, combustible, organization, alternately.
3. Distinguish between 'mineral' and 'metal.' To which class does coal belong?
4. What is the meaning of 'fossil vegetation'?
5. Accent the following words to indicate their pronunciation—destitute, maritime, Madagascar, represents, illustrate.
6. Sketch the substance of the lesson 'The Western Hunter.'

SPELLING.

1. It seems that alternately with shales and sandstones are to be seen inexhaustible seams of coal.
2. After two days' space they proceeded from the place occupied on the preceding day.
3. They implored him to pardon their ignorance, incredulity, and insolence which had created so much unnecessary disquiet.
4. They were called United Empire Loyalists, a term synonymous with gallant daring, patient endurance, and unrewarded loyalty.
5. Being proffered food at which he revolted he implored Arnold for relief, declaring that he preferred death to sufferings so intense.
6. Handcuffs, adjutant-general, provost, pursued, apparent, despatches, lieutenant, essential, tortuous, pendulous, employees, occurrence, separated, schooner, christened, intelligent, century-circled, unmanageable, incredible, rarer action, landscape, architectural, disease, campaign, fusee, rebellion, umbrageous.

GRAMMAR AND COMPOSITION.

1. Define, giving examples—Conjunction, Predicate, Gender, Transitive.
2. Write the feminine form of poet, lad; the plural possessive of mercy, sheep, ox; and the superlative form of good, wealthy, badly, evil, late.
3. Change the voice of all the verbs in the following—
   (*a*) 'It was proposed by the chiefs that our council should commence.'
   (*b*) 'On the breasts of many of them were seen silver gorgets which had been given them by their ally—the Sovereign of England.'
4. Combine the following into one simple sentence—
   (*a*) Sir Francis B. Head was an English statesman.
   (*b*) Sir F. B. Head was Governor of Canada.
   (*c*) Sir F. B. Head was an able diplomatist.
   (*d*) Sir F. B. Head held a council.
   (*e*) The council was with the Indian chiefs.
   (*f*) The council was upon matters of importance.
   (*g*) The council was held at noon.
5. Analyze—
   (*a*) 'Tis pleasant now to track the antlered deer.
   (*b*) O Wolfe, to thee a streaming flood of woe, sighing we pay.
   (*c*) How many times can 14 be taken from 98?
6. Parse—At noon I proceeded to a point at which it had been arranged to hold a council with the Indians.
7. Write a short account of how you spent last holidays.
8. Correct the following, giving reasons—
   (*a*) John don't write bad.
   (*b*) I don't like them sort of pens; they scratch the paper.
   (*c*) The air smelt sweetly.
   (*d*) I kind of thought you would be alone.

ARITHMETIC.

1. Define, with examples—Concrete, Compound, Least Common Multiple, and Complex Fraction.
2. How many times can 1 cwt. 15 lbs. 8 oz. be taken from 1 ton and how many oz. will be left?
3. Find the total cost of—
   Wood 24 ft. long, 16 ft. high, and 4 ft. wide @ $2.25 a cord.
   3,500 ft. of scantling @ $25.00 per M.
   2,830 lbs. of coal @ $9.00 a ton.
4. How many more sq. inches are there in 1809 po. 18 yds. 7 ft. 134 sq. in. than ozs. in 1 cwt. 18 lbs.?
5. What is the smallest sum with which I can buy sheep at $6 each, cows at $27, or horses at $84, and how many of each could I buy?
6. Multiply $99\frac{27}{33}\frac{9}{3}$ by $3\frac{3}{3}$ and find the integer nearest to the product.
7. A man sold $\frac{1}{3}$ of his farm to *A* and $\frac{3}{4}$ of the remainder to *B*. If there were 100 ac. in the farm at first how much is what he still owns worth at $75 an acre?
8. Three-fourths of *A's* money equals five-sixths of *B's*, and they together have $28.50; find how much each has.

Values—10 each. 75 marks full paper.

MENTAL ARITHMETIC.

1. $19+9-14\times3+8\div5+15-8\times4$.
2. $1750\div125\times12$.
3. I owed a man $3.79 and gave him a $5 bill, how much should I receive in change?
4. How many tons of coal could be bought for $58.50 at the rate of 5 tons for $45?
5. How many powders of $1\frac{1}{2}$ sc. each can be put up from an oz. of soda?
6. A floor is 21 ft. long and 6 yds. wide, what will be the cost of painting it at 30c. a sq. yd.?
7. A boy bought a number of oranges for $2.75 and gained $1.10 by selling them at 7c. each; how many did he buy and what did each orange cost him?

CANADIAN HISTORY.

1. Tell what you know of House of Commons, Local Legislature, County Council, Town Council. How are the members of these bodies chosen and how often?

2. What do we call the chief ruler of the Dominion? Ontario? Lanark? Town in which you live?
3. What do you know of Cartier, Champlain, Frontenac, Wolfe, United Empire Loyalists?

SPELLING.

GRADE V.

1. They were neither fit for warriors nor councillors.
2. After the business was settled the commissioners from Virginia acquainted the Indians by a speech that half-a-dozen of their sons could be educated at the college.
3. They usually ask them 'what news,' 'whither bound,' &c., and then give them necessaries for continuing the journey.
4. Tied inextricably together the whole body of invaders in canoes plunged into the cataract.
5. The Indians related the catastrophe of their pilgrimage.
6. I observed various predacious animals.
7. Desperately, separately, embarrassed, biscuit, accessible, acquiescence, parricidal, pageantry, apology, appetite, nauseous, odoriferous, calibre, coquetry, reprieved, vicissitudes, ammunition, parallel, reminiscence, volunteered.

GEOGRAPHY.

1. Define—Watershed, Latitude, Shore, Archipelago, Isthmus, and give an example of each.
2. Name the islands, gulfs, capes, and straits on the western shore of Canada.
3. Locate the capitals of the provinces of the Dominion of Canada.
4. Through what rivers are the following lakes discharged—St. Clair, Erie, Scugog, Nipissing, Lake of the Woods, Winnipeg, Athabasca, St. John?
5. What and where are—Belle Isle, St. John's, Chaleur, Yucatan, Regina, Albany, Fraser, Quinte, Anticosti, Welland, Hudson, Long?
6. Draw a map of Ontario and mark the position of the counties on Lakes Huron and Ontario.

ENGLISH GRAMMAR.

1. Define, with examples—Abstract, Neuter, Objective.
2. What is Number? Make simple sentences using the plural form of the following correctly—potato, lady, valley, goose, child, baby.
3. Combine into a simple sentence the following—
   Sir Isaac Brock fell.
   Sir Isaac Brock was the hero of Upper Canada.
   He fell in battle.
   It was the battle of Queenston Heights.
4. Analyze—
   (*a*) By cat you mean lynx, of course.
   (*b*) You're bound for York Fort, no doubt.
   (*c*) Let us a voyage take.
   (*d*) There shall we see the fierce white bear.
5. Parse—'What,' exclaimed the stranger, 'then you are not content?'
6. Describe the town in which you live.

ENGLISH LITERATURE.

(*Pupils will turn to page 239.*)

1. Where are the Queenston Heights? Name t o leaders in this battle.
2. Explain the meaning of—'the greatest excitement had pre' vailed,' 'portable property,' 'all was silent but the elements' 'mortal wound,' 'deadly struggle,' 'sharp skirmish,' 'prisoners of war,' 'memorable action,' 'when tatoo sounded,' 'deliberate aim,' 'fearful Americans.'
3. Who are meant by 'a free, a happy, and loyal people'? What is a garrison?
4. Give the meaning of—subjugation, sentinel, regiment, eminence, companies, militia, regulars, volunteers, reinforcements, midday.
5. Write from memory one verse of 'Somebody's Darling.'

ARITHMETIC.

1. How much greater is the product of 364 and MMLXXIX than the quotient of 8960436 by five hundred and nine?
2. At 90c. per yard, find the cost of 1 ml. 2 fur. 1 rd. of sidewalk.
3. Fourteen poor women receive 6 cwt. 1 qr. 25 lbs. 13 oz. of meat; how much is that for each of them?
4. A brick weighs 6 lbs. 4 oz. 8 drs.; find the weight of one thousand such bricks.
5. Find the amount of the following bill—
   1250 lbs. wheat @ 90c. a bushel.
   4250 lbs. oats @ 40c. "
   960 lbs. barley @ 75c. "
   750 lbs. hay @ $10 a ton.
6. Find the least number which when divided by 12, 15, 18, 20, or 24, always leaves a remainder of 5.
7. I bought a farm at $75 an acre and after keeping it for eighteen months sold it at $120 an acre, gaining $5,850; how many acres were in the farm?
8. Give examples of Abstract Numbers, Compound Numbers, Least Common Multiple, Common Measure.
   The quotient is $96,548, the divisor 729, and the remainder $56; find the dividend.

SPELLING.

GRADE IV.

1. He suffered from the folly of slighting ancient foot-marks.
2. Canova received the presents in presence of the guests.
3. The two days' labor in that abominable ditch has led me to distinction.
4. 'A strange assertion, indeed,' said the merchant.
5. Your excellency is a field-marshal of the empire.
6. The mere act of crying to the Almighty in my distress afforded me a little relief.
7. Sagacity, docility, benevolence, a capacity to receive instruction and attachment to his master's person, are qualities which belong to the whole race.
8. Experience, grandeur, ennoble, solicit, travelled, demeanour, delicacies, mattresses, incommode, recommended, decision, despondence, professor, marvellous, banqueting-hall, deliverance, shepherd, inexpressibly, consummation, discerning.

Value—40. 2 marks off for each error.

GEOGRAPHY.

1. Define—Ocean, isthmus, lake, plain, river, and prairie.
2. Give the boundaries of the Province of Ontario.
3. Name the counties on River Ottawa, and the inland counties, with county town of each.
4. Out of what waters do the following rivers flow—St. Clair, Ste. Marie, Ottawa, Niagara, Trent, French, and Severn?
5. Name the provinces of the Dominion, with capitals.
6. What and where are—Prince Edward, Barrie, Scugog, Toronto, Brantford, Welland, Tay, Smith's Falls, Rideau, Ottawa?
7. Draw a map of the county of Lanark, placing townships, railways, rivers, towns, &c.

GRAMMAR.

1. Name the parts of speech in the following—'One night those of us who had just been relieved were sitting on the lockers down below telling ghost stories.'
2. Divide the following into subject and predicate—
   'Faintly tolls the evening chime.'
   'I'll climb up to the top of it.'
   'Why should we unfurl our sail?'
3. Define—Sentence, Subject, and Noun.
4. Supply appropriate adjectives in the following—
   (*a*) The —— horse ran away.
   (*b*) Perth is a —— town.
   (*c*) The boy is said to be ——.
5. Write a simple sentence using the word 'privilege.'
6. Write a short account of what you do at home.

ENGLISH LITERATURE.

(Pupils will open books at page 67.)

1. Explain the meaning of 'used to relate,' 'I made some comparison between Latin and ditching,' 'toil conquered pride,' 'a liberal course of study,' 'the highest honors which his country can bestow.'
2. Who was the first President? Who is the President now?
3. Give the meaning of 'President,' 'experienced,' 'bread of labor,' 'humiliating,' 'abominable,' 'privileges,' 'appreciate.'
4. Did the two days' labor at ditching make John Adams President? What then was it?
5. Write from memory three stanzas from 'Speak Gently.'

ARITHMETIC.

(Time—One and one-half hours.)

1. Define—Multiplicand, Minus, Compound, and write table for "Square Measure."
2. Divide the result of $7825+6315-242\times3-864\div6+37852-79\times14+36782+1934275\div35$ by 49, using factors.
3. A man's house rent and taxes amount to $289.12 in the year. How much must he save weekly in order to be able to pay it?
4. A horse eats 3 gallons of oats in a day; how many bushels is that in a year (52 weeks)?
5. Find the difference, the product, and the quotient of 758697 and 509.
6. I took to the store—
   56 lbs. of butter @ 22cts. a lb.
   18 chickens @ 35cts. a pair.
   30 bush. potatoes @ 75c. a bag (each bag containing 1½ bush.).
   15 doz. eggs @ 12cts. a doz.
   And bought—
   60 lbs. of sugar @ 9cts. a lb.
   36 lbs. of oatmeal @ 9 lbs. for a dollar.
   15 yds. of cotton @ 14cts. a yard.
   8 blankets at $6 a pair.
   How much money was still due me?
7. Reduce 20416 ft. to miles, fur., &c.
8. What is the cost of 3 pks. 2 qts. 2 pts. of berries at 2½c. a pint?

Practical Department.

HINTS ON TEACHING SPELLING.

When should pupils begin to spell? There should be no oral spelling, or written spelling either, from memory during the first year and a half or two years of school life; yet pupils should be learning to spell from the start. How? By copying in script well written sentences set by the teacher on the board.

Sometimes these sentence should be taken from the primer, but they should generally be the language of the pupils themselves, including certain words given by the teacher.

Assigning Spelling Lessons.—The teacher should not merely say, "Prepare the tenth lesson," or "Your dictation will be the first twelve lines on page twenty-four." The pupils should pronounce after the teacher the words of the lesson, looking at them carefully as they do so. Peculiar or difficult words should be written on the blackboard and spelled simultaneously by the pupils, and hints should be given to aid in the preparation of the lesson.

Preparing Spelling Lessons.—We wish to teach the forms of the words, not their sounds. Unfortunately, forms of the words do not always agree with the sounds in English; hence the form of a word must be impressed on the mind through the eye and not through the ear. It is perfectly clear, therefore, that the art of making good spellers consists in teaching pupils to see words correctly. The London *Times* once said, "Spelling is learned by reading, and nothing but reading can teach spelling." It may be accepted as a rule that a good reader is always a good speller. These facts all point the thoughtful teacher to the conclusion that we have already stated—spelling depends upon the power of seeing with precision. It follows that the exercise which compels the pupils to look most carefully at words must be the best method of preparing a spelling lesson. Unquestionably, this exercise is transcription. Let the pupils copy on their slates the lesson to be prepared. The lesson may be prepared as a home exercise, if due care be taken by the teacher in examining both writing and spelling. This is necessary in order to compel scrutinizing attention to the words to be copied. The whole value of the exercise depends on this being done.

Repeating the letters of a word orally is of little benefit. Make the pupils see the words, and, if possible, never let a pupil see a word wrongly spelled.

Testing Spelling Lessons.—There are only two methods, oral and written. The oral method alone is of very little practical value. An American writer records the case of a young man "who won three prizes at spelling schools, but made five mistakes in spelling in a note written to a school-board." Oral spelling does not accustom the eye to the form of the word in writing. This is a fatal objection to it, and all modern teachers recommend that spelling lessons be conducted chiefly in writing.

Correcting Spelling Lessons.—They must be corrected thoroughly. If proper preparations have been made as recommended, very few errors will be made. In a large class the teacher will not be able to examine personally the book or slate of each pupil, except in review lessons consisting of words previously misspelled in the class. These should always be examined by the teacher. In other lessons, one of the following plans may be adopted:

1. The pupils exchange slates, and the teacher gives the correct spelling, word by word, the pupils marking those that are wrong.
2. Pupils retain their own slates, and the different pupils are called on to spell the words. Those agreeing with the spelling indicate it by raising the hand before the teacher decides as to its correctness. Marking as before.
3. Slates are exchanged, and the corrections made as in No. 2.

While the teacher writes the correct spelling on the board, each pupil may correct his own work, and slates and books be exchanged for revision only. The latter method is probably the best with honest pupils.

In all cases where slates are exchanged, the pupil owning the slate should have the right to appeal against the marking done by his neighbor.

Reviews.—Each pupil should write correctly the words which he misses, about five times, to impress the correct forms on his mind. In addition to this, he ought to make a list at the end of his book of all the errors he makes.

From this list the teacher should prepare his reviews. The words missed are the only words that need to be taught. "Leave no enemy in the rear." Review regularly.

General Suggestions.—1. The teacher should always articulate clearly and pronounce correctly when giving words for spelling.

2. Never overstrain the enunciation of a word in order to indicate its spelling.

3. Allow only one trial in spelling orally or in writing.

4. In spelling orally, the divisions into syllables should be marked by slight pauses, but in no other way.

5. Do not assign lessons too difficult for the pupils who have to prepare them. This compels the pupils to spell badly.

6. It is desirable that spelling should be taught to a considerable extent by means of composition, in order to give the pupils practice in spelling the words in their own vocabularies.

7. In some of the dictation lessons, time may be saved by having only words in italics spelled. The teacher should read the whole sentence and emphasize the words to be spelled.—*Preface to Gage's Practical Speller.*

NOTE.—This article was written by Inspector J. L. Hughes, in 1880, and appeared in our columns in the spring of that year. It was copied without proper credit by numerous American journals, and appeared in these pages once more in 1882 credited to an American journal by an oversight of the editor. It is still going the rounds of the press, and we insert it once more, partly to correct our former oversight and render honor where it is due, and partly because it cannot fall too frequently under the notice of our readers.

READING ALOUD.

The parliamentary recess affords an opportunity for the discussion of many subjects of importance to the general public, for which the daily papers would not be able to spare room while Parliament is sitting. Since the prorogation, several topics have been discussed of interest to teachers, and among these the question of the teaching of reading in schools. We last week gave extracts from letters which appeared in the *Times* on reading aloud, from which it will be seen that there exists a very general consensus of opinion that this subject is at present very badly taught in schools of every grade. It is necessary that the distinction between reading and reading aloud should be carefully borne in mind. There are many intelligent persons who are able thoroughly to enter into the meaning of an author themselves, yet who, if asked to read from that author aloud, would be utterly unable to do so in a way calculated to please or profit their audience. This fact seems not to be known to Mr. Byrne. He says, justly, that one main object of an elementary school is to turn out scholars who have a taste for reading. But when he states that a considerable degree of proficiency in reading aloud is necessary in order that a man may be able to take a pleasure in reading, he says what the experience of most of us proves to be not true. There are many who will read with delight and profit their favourite authors who are possessed of no degree of proficiency in reading aloud. The ability to read and the ability to read aloud are two different things. By the former, we mean the ability to comprehend the ideas of another through the medium of written or printed characters ; by the latter, we mean, in addition to this, the ability to translate written into spoken language, so that those listening to us may also comprehend the ideas of the author read. It would be well if different terms were employed to denote these two different things. What Mr. Byrne pleads for is neither more nor less than the teaching of elocution in our elementary schools.

No one can doubt the importance of the subject. There are few intellectual pleasures greater than that of listening to a good author as interpreted by a good reader. And it has this advantage, it is a cheap pleasure ; one within the means of the working classes. If the majority of the children left our schools with a taste for good reading and the power of reading well aloud, a very great deal would have been done for them. But there are one or two points in connection with the cry for improved reading that should be borne in mind. In the first place, the ability to read well aloud is due to the possession of a natural gift as much as the ability to excel as a musician or a painter. This gift may or may not be cultivated, but in its absence no amount of skilled instruction will suffice to make a really good reader. At present, an inconceivable waste of time is incurred in the attempt to make good musicians of some of the children of our middle and upper classes. Any music teacher of experience could tell of numerous cases where the necessary natural powers were absent, and yet in which years were devoted to the acquisition of a merely mechanical style of playing. So in reading, there are few children who might not, if the necessary time and attention were devoted to them, be made fair readers, but only a few comparatively who could be trained to be good readers. For these we would provide the necessary training and instruction, just as in the case of any who showed special talent in drawing. But it would be a waste of time and labour to attempt to make all, or even the majority, of the children attending elementary schools good elocutionists. The teacher can do much, but he cannot impart faculty. The delicate taste, the quick perception, the musical voice—the natural qualities, in short, which must be possessed by a good reader may be strengthened and improved where they exist ; in their absence, however, it would be vain to expect any large measure of success. Further, it is not every teacher who is himself qualified to teach elocution. It needs a good reader to train good readers. The students in our training colleges have so many more important things to attend to, as learning the exact height in feet of the Suliman Mountains and the exact length in miles of the Rio Negro, that but little time can be devoted to the acquisition of the art of reading aloud. When it is remembered that special qualifications, in both teachers and pupils, are requisite for the production of really good readers, the paucity in their number is largely accounted for.

But, for teachers, a more important matter still is the question of time. We admit fully that much more might be done in training children to read aloud than is attempted at present, if only teachers had the necessary time. We dread lest the result of the discussion of the subject that has taken place should lead to an addition to the burdens of teachers and pupils, already grievous and hardly to be borne. We may have some enthusiastic member of the School Board for London proposing a resolution that reading aloud should be more encouraged in the Board schools, and other school managers following suit. Then will follow what has happened so frequently aforetime. It is easy to show how important is the teaching of drawing, and we have regulations laid down that so many hours per week must be devoted to drawing. Then we have some member proving what is very easy to prove, the importance of a knowledge of social economy, and straightway the Board Inspectors are directed to report upon the teaching of that subject in their districts ; in other words, pressure is to be brought upon the teachers to add that subject to their already too extended curriculum. And now, we suppose, we shall, in addition to the already long list of Board Inspectors and Instructors, have a Reading Inspector or Reading Instructor. It is time that the question should be faced how many hours per day can be profitably devoted to school work, and how that time may be distributed so as to secure the largest amount of benefit to the pupils. We would add one word to Mr. Byrne and his brother inspectors. It might be possible to do more for the children in the time even now devoted to reading, if the requirements in the earlier standards with respect to mechanical accuracy of reading and spelling were relaxed. As it is, we may well wonder that any pupils should leave our schools with a taste for reading, seeing the drudgery they have to go through in order to meet the Government requirements. One of the evil results of the system of examination which has been in vogue during the past twenty years has been the adoption by teachers of methods calculated to inspire many of their pupils with a distaste for books of any kind, so that, once free from school, they have no desire to adopt a course of profitable reading. It will be a good thing for the country when all concerned recognize the importance of making school life and work a pleasure, and adopt the means conducive to that end.—*The Schoolmaster.*

THE UNIVERSITY,—HOW AND WHAT?

BY WM. W. FOLWELL, LL.D.

The present state of the higher education in America can be briefly comprehended in one word,—chaos. Thirty years ago there was a college course, simple and distinctive,—the education of the gentleman and the clergyman. That good old classical curriculum has nearly faded from view, though its thread of good still runs along the broad web of scholastic life and work.

The elective system has come in like a flood. When there is not full election of studies, there is election from numerous courses of study. This election descends into the preparatory schools, and we see youths of fifteen choosing their studies, as they choose their hats and shoes ; albeit with somewhat greater independence of fashion The elective system has been vastly extended through the competition of an excessive number of small denominational colleges for attracting students. Here we meet the signs of a religious chaos, which is chiefly the cause of the confusion in our higher education. Each sect is logically bound to undertake the conversion of mankind to its particular tenets. Otherwise it has no right to exist. Colleges and universities are regarded as a necessary part of the

apparatus of evangelization. The political chaos is hardly less conspicuous than those of religion and education.

Such is the aspect of affairs as we view them, faced to the rear. Looking forward, the prospect is brighter. Civil service reform promises at length to bring order out of political chaos. The clear and consentaneous movement toward fraternization, not to say consolidation, of sects indicates the ultimate reunion of the body of Christ. Already has the amicable spirit affected education. As fast as sects and churches have caught it, have they disbanded the schools of the sect, and thrown their influence in support of the school of the Christian community. We are emerging, then, from chaos. There is a certain spirit of the age which assists. We look to our knowledge of the knowable, rather than to our surmises about the unknowable. Ours is the age of science, not of superstition. The spirit of the age appears in the higher education of modern nations. It has transformed the universities of Europe from strongholds of ecclesiasticism into grand emporiums of knowledge and research.

The university will at length appear in America. Has it not yet appeared? Are there not among the hundred and more institutions calling themselves universities some which in character correspond to the title? Probably not. Why? Simply because they are loaded down,—handicapped with a vast burden of work which has no place in genuine universities. Now, it needs to be sounded up and down the land that there can be no genuine university in America until there shall have been developed atop of the primary schools a system of secondary schools, more extensive and efficient than those now existing, in which students may do all the work which precedes a proper university course.

The people need to understand that there is a natural division of educational work into three distinct but adjacent epochs: the primary education for the child, the secondary education for the youth, the superior education for the adult. No system can be complete and orderly which does not embrace these three, properly assorted. If we have no genuine universities in our country, it is because we have no suitable system of secondary schools. In the attempt to build universities before developing secondary schools, our States have reversed the order of nature. Everywhere the cry needs to be raised,—"No more colleges, no more universities, till we have more and better middle schools!"

We need, then, secondary schools of high rank, with courses of study extending about midway up the average college course, as the foundation for the genuine university. We also need them for their own work and influence. The Americans have been called the most common-schooled and least-cultured people in the civilized world. Matthew Arnold is probably right in pronouncing us a vast horde of Philistines, happily unburdened, however, as his English countrymen are not, by a vulgarized populace and materialized barbarism. Mr. Arnold proposes as the remedy, for England and America, the development of the secondary education. The common schools must continue to teach children those rudiments indispensable to the civilized man. The secondary school is needed to diffuse culture and develop directive power. The development of the secondary education will simplify many vexatious educational problems:

First: The problem of elective studies. In primary schools there will be no elective; in universities there must be absolute election: in secondary schools there will be merely the election between literary and technical careers. The steady, patient pursuit of some line of studies, approved by experience throughout the period of youth, is essential to education in the true sense of that word. The present American college being about half university and half secondary school, we have a miscellaneous confusion of methods and discipline.

Second: The dormitory problem. Build up the high grade secondary school in every considerable town, to which the youth may resort from their own homes, and not much remains of this question. The modern, the Protestant idea, is to link home and school fast together; it is the mediæval, the monastic idea, which segregates youth from home and parents, and places them under the care of teaching-priests.

Third: The co-education problem. Build up the local high school till it shall be the homologue of the gymnasia of Germany, or lyceum of France, and let your daughters resort to it from the safe harbor of home, and this problem is more than half solved at once.

Fourth: The problem of industrial education. We shall soon be obliged to follow the example of older civilizations in respect to this education. The attempt to organize industrial work in connection with literary colleges has not proved successful and will not. This education assorts naturally with that of the secondary epoch, and forms part of the training of youth.

Fifth: The problem of business education; and sixth, that of the military education. Both of these fall naturally into the secondary epoch, and have no place among the studies which occupy the grown man in the university.

The genuine university awaits, then, the previous arrival of the secondary school. When it shall appear it will be recognized, not by the splendor of its housing and equipments, but by these two signs: (1) A large body of mature students whose secondary education shall have been completed, and who are ready for the studies of men; and (2) by a body of teachers who are experts and specialists, conducting and administering its affairs. Given these two things and they form a university, no matter if they meet in sheds and lofts.

It is of the nature of the university to have all knowledge for its province. All sciences have a common bond, and are at home within her precincts. The linguistic, historic, and philosophic sciences will ever hold their place. The political sciences, now that democracy has come and come to stay, have an importance vaster than ever. If the people will govern themselves, the people must know,—good fellowship and patriotism will avail nothing without knowledge.

The genuine university, then, lies in the future. The college of the present day is doing such work as there is to do. Since no magic can give both at once, it is doubtless far better to be much common-schooled than much cultured. The work of the generic university is not worth while except as it arises from, and responds to, a wide and deep general culture. The immediate work for America is the development of the secondary education.

NORMAL SCHOOLS: THEIR ORIGIN, OBJECT, AND CONDITION.

BY PROF. E. C. HEWETT, PRESIDENT.

Mr. Hewett, in his opening address, said:

1. That good teachers are the great want of our schools, nor is there likely to be a change in this respect.

2. That any school whose sole purpose is the fitting of teachers for their work is a normal school, and it is proper to confine the name to such only.

3. That owing to circumstances, no one pattern of a normal school can be best made for all; that such schools ought to be of different types and different grades.

4. That the history of normal schools in this country has fully demonstrated both their necessity and their worth; and that it is

fair to claim for them much of the credit for advance in education.

5. That normal schools should be supported at the common charge, because otherwise they will not be founded in sufficient numbers, and because they need to do a work which schools dependent for support upon popular patronage cannot do.

6. That such schools are in no sense public charities, but that the public should support them for its own sake as a wise means of economy.

Prest. Hewett next dwelt upon the work of the normal schools, and in conclusion asserted as follows:

1. That they should make their pupils acquainted with human nature in its capacities, tendencies, wants, and limitations, especially as these appear in the life of the child.

2. That the subject-matter of instruction should receive attention to any extent that may be necessary, and that I believe that the ideal normal school will not omit it altogether.

3. That the study of methods and modes ought to make up a larger part of the work of these schools.

4. That, while it would be foolish to attempt uniformity in detail, it is desirable that there be uniformity in adherence to underlying principles, and that a body of educational doctrine should be formulated and disseminated.

5. That the work of training or practice should have a prominent place in all our normal schools.

6. And, in addition to what has been said already, that every normal school should awaken in its pupils a genuine enthusiasm respecting the work of teaching, and a true professional feeling, or *esprit de corps*.

Prest. Hewett also said: Are these assertions of mine true or false? Are there other things equally fundamental, which I have overlooked? How shall we best settle these questions and others that may arise? When we clearly see what we want to work out in our schools, how shall we arrive at better modes of working? How shall we bring the truth that we know before the people so as to do them the most good, and to move them to give us the most assistance in our efforts to bless the coming generations? These are the questions for the consideration of which we are met together.

THE MODEL SCHOOL.

Prof. Charles De Garmo, of Normal, Ill., read a paper on "Place and Function of the Model School." In recapitulating the conclusions of the paper, the author said that he found the function of model schools to be four-fold; the work consisting primarily of model-teaching for imitation and of actual pupil-teaching in the training department; incidentally of experimentation on new ideas and methods, and the determination of the kind and quality of work to be done in the common school. He found that model-teaching for imitation should come early in the course, and may profitably be confined to the primary grades. That the pupil-teaching should come in the latter half of the course, and should be continuous rather than broken, and in the main conducted in the presence of a cloud of witnesses. That experimental and determining work, though important, are now merely incidental, and likely to be neglected. Through their model and training schools must the normal schools of America look for the exposition of their best results, and through them more than any other agency must they look for the approval and support of the people. That is professional work which fits for teaching, and that is the best professional work which best fits for teaching; but to be properly appreciated and supported our normal schools must not only be professional schools, but they must also seem to be professional schools. That the end and aim of model schools is professional can be seen by everybody.

CO-EDUCATION OF THE SEXES.

H. S. Tarbell, of Indianapolis, Ind., Chairman of the Committee on Education for Girls, submitted his report on the question of co-education in secondary and collegiate schools. It contained the following propositions:

1. The object of general education for every individual being the same, the means used should be the same, except as modified by the characteristics and circumstances of the person to be educated.

2. These means should be a thorough elementary training in those objects best suited to give needed information and essential culture, followed, when the individual circumstances require and permit it, by a higher elective course of study.

3. The question of the education of girls, as distinguished from the education of boys, is only a phase of special education. There are no intellectual differences between the sexes that require or justify a difference in their general education.

4. Neither the right of girls to equal advantages with boys nor their equal capacity for intellectual effort and attainment is longer disputed, though certain mental differences in the sexes are generally recognized.

5. Sex is but one element, and not always the main one, in determining what the higher education of the individual shall be, or at what point it shall commence; co-education is the plan of nature, and the practical difficulties in its way are disappearing before improved methods, and in the light of successful experience.

6. In institutions established by the State and supported by the public funds, the element of economy, combined with efficiency, will always be carefully considered; and if the State gives the girls within its borders equal advantages with the boys, it will endeavor so to do with the least expenditure and with the smallest practicable addition to educational machinery, or of disturbance to existing institutions. These conditions are evidently met by the admission of girls to the institutions provided for boys.

7. Experience shows that the higher education of young women is successfully conducted in the same institutions and classes with young men, without the presence of either sex affecting the other more than at church or at the theatre. The young women become more decorous; the young men, more reserved and dignified. The danger of improprieties in the association of the sexes in schools is less than in the cominglings of fashionable life.

8. In all schemes of school education allowance must be made for the education to be obtained from the family, society, the church, and the State, and for the time and effort which these means of education will consume. A further allowance must be made for the demands of growth and the contingencies of ill-health and some degree of irregularity of attendance. Young people should not be allowed to work up to their strength. There should always be the possibility of greater effort without the appearance of harm. These allowances being made and the system being elastic enough to admit them without serious jar, the co-education of the sexes will be found to have important advantages for both over and scheme of education for boys and girls separately. It seems, therefore, to be for the interest of the State, of society, and of most individuals that co-education of the sexes should prevail in institutions supported by the State.—*Report of National Council of Education, Saratoga, July*, 1883.

COMMON SENSE AND SPECIAL SENSE IN COMMON SCHOOLS.

A good deal of the recent criticism on our common schools is off the track and of little practical use, because it is a one-sided judgment, by specialists, on an institution whose vital merit is its commonness and its adjustment to the ordinary needs of all sorts and conditions of people. Specialists are, of course, exclusive and are apt to give undue prominence to their own line of thought and operation. Thus, an eminent master of a technical school very naturally looks at education through a vista bristling with the tools of his department and easily falls into the notion that the "use of tools" is an indispensable requisite to a common school education. But since the artisan class, even in cities, rarely exceeds one-fourth the population, a compulsory education of all male children in the use of tools would change the common school for the whole people to a school of mechanics for a minority. Possibly, one-

third of the girls in Boston or Chicago will not receive a proper home training in housework and the use of the needle. But a class of lady-managers of public institutions who are brought in contact with the shiftless side of girl-life jumps to the conclusion that house-keeping and sewing should be made compulsory in common schools, forgetting that two-thirds of the mothers prefer, and all mothers ought to prefer, to give all needful instruction in such things at home. Now the ghost of some great teacher of mathematics bestrides the shoulders of the public school, like the old man of the sea, and drives arithmetic up and down the school-room to the neglect of all things else. And now English literature, "gems of thought," and authors' birth-days, become the hobby; or the writing-master or the music-master gets the inside track, and the school, like the Mississippi River at high water, lurches off through a new channel, leaving the old bed high and dry. About every distinguished critic that has recently drawn a long bow against the common school has simply advertised his own specialty as the grand educational panacea. Now it is the clerical, now the scientific, the classic, the literary, the industrial, the sanitary test that is applied, and the common school delared worthless because the critic's favorite prescription is not appreciated and made the centre of public discipline.

The common school is an arrangement for the common instruction and discipline of the masses of American children into that awakening of the mind, training of character, and imparting of useful knowledge which are absolutely necessary for good citizenship. Many things conspire to the making of a true man and a complete American citizen. The majority of them are things which can only be done by the special and persistent working of great fundamental institutions and agencies which make what we call society. The home, the church, good society, the business of life, and, in our country, the public life of the citizen, are each essential to the complete discipline of a good man and a good citizen. All these agencies are permanent, and work through the whole life, and must be largely relied upon, both for private and public education considered in its largest sense. No evil can befall us so fatal as the weakening of any of these fundamental agencies for the training of our people. Anything, however specious and promising, that weakens the sense of parental responsibility for the home training of girls in all the duties of domestic life is mischievous; for no institution can permanently do the work of the home, and no teacher can take the place of the mother. So with every institution named in this connection: the true policy is to hold each strictly to its work, and make it responsible for the fit performance of its peculiar vocation.

Now the common school, at best, covers from five to ten years of the life of young America. It has a most vital relation to the child during those years; proposing to awaken the love of knowledge, train the faculties used in the investigation and acquisition of truth, direct the youth in his search for wisdom through nature and up and down the wilderness of books, and as an absolute condition of success in this work, train the pupil in good morals and good manners, keep him reminded of the claims of practical life, and, especially, give him a constant drill in the public virtues becoming an American Citizen. This arduous enterprise can only be made a success by confining its ambition strictly to the few things possible to be taught or done in the few years of school-attendance. Any attempt to reconstruct the common school according to the program of the specialist, however brilliant or eminent in his own line, will work a double mischief in crowding the school and weakening the sense of responsibility elsewhere.—*N. E. Journal of Education.*

RULES FOR TEACHING.

TRANSLATION FROM DIESTERWEG.

I.—With Regard to the Pupil.

1. Teach naturally.

2. Regulate your teaching by the natural grades in the development of the growing individual.

3. Begin teaching at the standpoint of the pupils; guiding them from there onward, steadily and thoroughly, without interruption.

4. Do not teach what is in itself nothing to the pupil when he has learned it, nor what will be nothing to him at some future time.

5. Teach intuitively.

6. Proceed from the near to the remote, from the simple to the complex, from the easy to the difficult, from the known to the unknown.

7. Follow in teaching the elementary method (inductive, from particular to general), not the family scientific method (deductive from general to particular.

8. Follow, above all, the psychological aim, or the psychological and the practical at the same time. Rouse the pupil through the some topic presented from as many points as possible. Combine, especially, knowledge with ability, and exercise the knowledge until it is shaped by the underlying train of thought.

9. Teach nothing but what the pupils can comprehend.

10. Take care that the pupil retains all that he learns.

11. Do not simply train and polish; education and discipline are not for this, but to lay the general foundation on which to build the character of the individual, the citizen, and the nation.

12. Accustom the pupil to work; make it for him not only a pleasure, but a second nature.

13. Recognize the individuality of your pupil.

II.—With Regard to Subject Taught.

1. Apportion the matter of each subject taught from the standpoint of the pupils and as indicated above, according to the laws of his development.

2. Dwell especially on the elements.

3. In the establishing of derived principles, refer frequently to the fundamental ideas, and deduce the former from the latter.

4. Divide each step into definite steps and little wholes.

5. Point out at each step some part of the following, in order that the curiosity of the pupil may be excited without being satisfied; proceed so that no essential interruption shall arise.

6. Divide and arrange the subject-matter so that, where it is practicable in each succeeding step of the new, the foregoing may appear.

7. Connect those subjects which are especially related.

8. Go from the thing to the sign, and not the reverse.

9. Be guided in your selection of a method by the nature of the subject.

10. Arrange the subject taught, not according to a special scheme, but consider constantly all sides of it.

III.—With Regard to Outside Circumstance of Time, Place, Order, etc.

1. Follow up subjects with your pupil successively, rather than together.

2. Take into consideration the probable future position in the life of your pupil.

3. Teach with reference to general culture.

IV.—With Regard to the Teacher.

1. Strive to make your teaching attractive and interesting.

2. Teach with energy.

3. Make the subject to be learned palatable to the pupils; and require, above all, a good utterance, sharp accent, clear statement, and thoughtful arrangement.

4. Do not stand still.

5. Rejoice in development or progress; first, for yourself; second, for your pupils.—*New England Journal of Education.*

Notes and News.

ONTARIO.

Mr. T. O. Steele, late principal of the Perth Model School, has been appointed Principal of the Barrie Model School.

Mr. Munro, B.A., assistant master in Stratford High School, has accepted a more lucrative situation in Belleville High School.

Principal McCabe of the Ottawa Normal school has for some time been engaged in the compilation of a History of England for use in Catholic schools.

Mr. H. S. McLean, of Lucknow, has been engaged as second assistant teacher in Clinton High School, salary, $650 per annum, in place of Mr. W. R. Lough, who has been appointed head master of Clinton Model School.

Bad boys, who knew they would never get them any other way, broke into Hunter street school, Hamilton, and stole all the prize books intended for the Christmas examinations.

The whole staff of New Hamburg teachers has been re-engaged at present salaries, viz. : Mr. W. Linton, $600 ; Mr. P. H. Baehr, $500 ; Miss Mary Cooey, $300 ; Miss Laura Wegenast, $200.

We have received *The School*, a bi-monthly journal published by the Literary and Musical Society of the Stratford High School. It is a sprightly, readable paper, and indicates intellectual life in the High School.

Two classes of boys in the Jessie Ketchum school, Toronto, are being taught to knit, and the novelty seems to be appreciated by the lads, who are doing well at it. They practice with two needles half an hour two days in the week, under the charge of one of the lady teachers.

Brant graduates, and undergraduates of Victoria, Trinity, and Albert Universities have organized, and after full and free discussion have adopted a resolution strongly objecting to aiding Toronto University and University College out of the public funds at the expense and to the detriment of the other universities.

The London *Free Press* thus refers to the death of an estimable young lady who taught school in Blyth during the year 1881 : "The death is announced, after a brief illness from typhoid fever, of Miss Ella MacCormack, who has been teacher in the school over Clark's Bridge for some time past. She taught in her usual place a week ago Friday. Miss MacCormack was greatly beloved by her scholars, and highly respected by all who had the pleasure of her acquaintance."

The Ottawa Teachers' Association has adopted the following report of the committee on temperance with reference to the introduction of a text-book on alcohol : That it would be better to put these works of reference in the hands of the teachers rather than into the hands of the pupils ; that the lesson on alcohol should form simply a part of the general health lessons ; that lessons so introduced into the Readers to be made a basis of instruction on this special part of the general subjects of health and of morals.

The survival of the unfittest finds an example in those schools which are yet teaching permutation, progressions, circulating decimals, insurance, annuities, compound interest, English money, and the like, in arithmetic. Similar unpractical topics waste the pupils' time in other subjects. The amount of live practical matter at hand is so great that there is no excuse, except ignorance, for using such dead matter.—*Minn. Journal of Education*,

We regret to state the Board of St. Mary's Collegiate Institute has taken a step backward by reducing the salary of the headmaster from $1,200 to $1,000. This penny-wise policy will bring its own punishment in due time. Time is a severe disciplinarian.

The Board of the Oakville High School has taken a step towards retaining the services of a successful well-trained teacher, by adding $150 to the salary of N. Wellwood, B.A., the headmaster. This is the true policy ; find a good man, and keep him. The teacher is the school, and the value of a good teacher is far above rubies. Well done Oakville !

"To be intellectual, to write books, to do wonders in mental pyrotechny, is not the chief end of man, nor can we make it so. This is, indeed, what we seem to be aiming it, but we shall fail. Nature will prove too strong for us here ; and, if we persist, she will just smash us up, and replace us with a people not so tormentedly smart. It is to the weak, not the brilliant, that the possession of the earth is promised." We quote the above from the CANADA SCHOOL JOURNAL, but it is not bad reading for this latitude. Young teachers, especially, are apt to forget that the moral is more than the intellectual ; that to be honest is deserving of more praise than to be brilliant ; and that the pure in heart, not the keen in mind, shall see God.—*N. E. Journal of Education.*

Your correspondent noticed in the November *News*, a conundrum from Oakland county correspondent, asking why female teachers, who do the same work that male teachers do, do not receive more than about one half the compensation. Perhaps the theory I hold is not the correct one, but I venture to give it, and let it be taken for what it is worth. Though I am a man teacher yet I think that female should receive as much as male teachers, provided they do the same work, and it is my idea that the ladies are entirely to blame. They have all formed an idea that they cannot earn as much as a man, and consequently they offer their services for about a third of what they might receive. Ladies, you must say that you will have so much, and we cannot get along in the profession without you, and you will get what you ask every time. I saw a lady teacher at Flint talk an hour and a half with a school director for four dollars on a month, and finally she received just what she asked. All the reason he wished to cut down on her price was that a man had offered to teach the same school for what she wanted. All of you do the same thing and the result must be nothing but favorable.—*Educational News.*

The following gentlemen were duly elected members of the Tuckersmith Public School Board for the current term : Ward No. 1, Wm. Payne ; No. 2, George Sproat ; No. 3, Peter Dayment ; No. 4, David McCloy. Messrs. Payne and McCloy are new members ; Mr. Dayment has already served one term, and Mr. Sproat has been a member of the Board since its organization. At the meeting in Ward No. 2, Mr. Sproat advocated the erection of an addition to each of the woodsheds so as to make a stall for the accommodation of a horse, explaining at the same time that trustees, clergymen, and others frequently desired to visit the schools when passing but are deterred from the fact that there is now no safe place for their horse. The suggestion is an excellent one, and as the cost would be a mere trifle it is to be hoped it will be carried out by the Board.—*Expositor.*

The Board of Education for the county of Huron met pursuant to notice. Resolved.—That the assembled members of the County Board of Education desire to express our heartfelt sympathy with our respected co-worker, Archibald Dewar, Esq., in his affliction, caused, in some measure, no doubt, by the arduous duties of his office. For the past twelve and a-half years we have sat side by side with him in deliberating over the educational matters connected with the public school interests in the county, and we have always found him a wise and considerate counsellor, one having the welfare of the education of the youth fully at heart, always desirous to promote the interests of the teachers, a true, scholarly gentleman, and a genial and sympathizing friend. We, therefore, very much regret that through heavy affliction, he has been compelled to resign his position as Inspector, but trust that his life may be long spared, so that at the meetings of the Board we may still have his valuable and efficient assistance and judicious council, and that thus our official relationship, always so cordial and pleasant, may still continue in the greatest harmony. And that the Secretary be instructed to forward a copy of this resolution to Mr. Dewar.—Carried.

As will be seen by the report of the proceedings of the county council, Mr. Archibald Dewar has been forced by ill-health to resign his position of Public School Inspector for North Huron. Mr. Dewar was the first Public School Inspector appointed for the district under the new act, and has now held the position for about twelve years. We venture to say that there is not a ratepayer in the entire district who will not deeply regret the retirement of Mr. Dewar as well as the cause which induced it. He was a faithful and efficient Inspector and was universally popular with trustees, teachers, and parents. For some time after his appointment, in common with other Inspectors, he had an extremely difficult task to perform. The administration of a new law, and one very much more stringent and exacting than any we had previously experienced, without unduly irritating the people, required tact of no ordinary character, and Mr. Dewar succeeded in this most admirably. While his firmness secured entire conformity with the law, his affability won him friends everywhere, and he procured the willing consent of the people to improvement which, if he had tried to enforce, would have raised them up in arms against both himself and

the law he was administering. Whenever Mr. Dewar desired a new school house erected, or an additional teacher employed, he almost invariably got what he asked, and the concession was made willingly and cheerfully by the trustees and people, and he can now fairly look back with pride and pleasure upon the excellent work he has done, under the law, in North Huron. Mr. D. M. Malloch, of Clinton, has been appointed Mr. Dewar's successor. He is an experienced and able teacher and we do not know of any one who could have been selected, better adapted in every respect to carry on the work which has been so well commenced and so ably prosecuted by his predecessor. We shall be much mistaken if Mr. Malloch does not perform the important duties of his new position with credit to himself, benefit to the district, and to the satisfaction of the people. The new Inspector commenced his duties on the 1st of January.—*Huron Expositor.*

This session a departure from the ordinary routine of Normal school life has been inaugurated in by the students, in the formation of a Literary and Musical Society. The meetings are held weekly in the Normal school, and so far have been most successful. The following are the officers: President, Geo. M. Ritchie of Barrie; vice-president, Harry Chapple of Durham; secretary, Geo. K. McDowell of Stratford; committee, Harold Clark of Toronto, Aaron Orr of Norwood, and Wm. A. Scott of Berlin. The programme usually consists of vocal and instrumental music, readings, debates, etc. A recent evening's proceedings embraced songs by Misses Gladish, Henderson and Brown, and Mr. Scott; readings by Misses Alexander and Scott, and a debate in which Messrs. McDowell, Cowie, Fry, and Stewart took part. At the president's request, Dr. Davies, president of the school, addressed the society, giving kindly words of encouragement and offers of assistance.—*Toronto Telegram.*

The teachers of Windsor have, for some time, practised the commendable plan of holding monthly conventions, for the purpose of discussing books, methods of instruction, &c. At the meeting, held in the model school, Windsor, Nov. 15, views and opinions taken from the reading of an appointed book in the school library, were given by some of the members. Mr. M. Morrison, second master of the separate school, showed his plan of teaching per centage. Mrs. Williams, principal of the colored school, read an essay on the Life and Times of Dr. Ryerson. Mr. A. McNeill gave a good address, criticising Thwing's Reading of Books. The several subjects were discussed. Besides those who took part in the proceedings, the following attended: Mrs. Labodie, Miss Fuller, Miss Keyes, Messrs. J. Duncan (president), A. Sinclair, M.A., D. Chenay, and A. Bondy. Mr. Sinclair was elected president, and Mr. Morrison secretary for the ensuing year.

Mr. H. W. Hoover, an Ontario teacher who has had charge of Danville, P. Q., Academy for the past year, has resigned that position to pursue the study of medicine. Mr. Hoover earned golden opinions from the citizens of Danville, and his departure was marked with much sorrow and many valuable souvenirs.

Geo. Stewart, B.Sc., who was assistant in Smith's Falls high school, has accepted the position of science and English master in Orillia high school at a salary of $800. Mr. Stewart is reported to be an able and successful teacher.

The following petition is being printed under the direction of the Women's Christian Temperance Union, and copies will be sent to all School Trustees immediately:—Gentlemen,—Believing that the education of the people would to a great degree prevent the evils of intemperance, we, the undersigned, urge the introduction of scientific instruction into the Public and High schools. We would respectfully but very earnestly call your attention, 1. To the terrible effect caused by the excessive use of alcoholic liquor upon the health, mind and morals of large numbers of our people, and pressing necessity for some sure and effective remedy therefor. 2. That in a large majority of cases the habit of drinking is contracted by children and youths without any correct knowledge of the nature of alcoholic liquors, and their effect upon the human system. 3. That no more efficient medium than the public school can be found for imparting the much needed knowledge to the rising generation of our country, thus furnishing them at the very threshold of life with the best means for avoiding what the celebrated Dr. Andrew Clarke has justly denominated, "The Enemy of the Human Race." 4. That in London, Manchester, Birmingham, Edinburgh, and other large cities of Great Britain, scientific temperance instruction has been introduced as a regular part of school work, and with the best possible results. 5. That in numerous cities and towns in the United States, and notably in New York city, Temperance text books have been introduced, and this course is endorsed by their best educators and philanthropists. Inasmuch as the power has been granted you by the regulation of the Minister of Education in connection with "temperance and hygiene," we therefore earnestly request that you will order adequate stated instruction to be given on this subject by the teachers under your supervision to the public attending their schools; also that the pupils be examined on the subject for promotion as a basis for this scientific temperance instruction. The following approved text books are suggested for reference, or to be introduced into the schools: Dr. Richardson's Text Book on Temperance, Alcohol and Hygiene; Miss Colman's Temperance Text Book, G. D. Platt, of Picton, Ont.

NOVA SCOTIA.

The chair of Mathematics in the Halifax High School, made vacant by the election of Mr. Alex. McKay to the Supervisorship of City Schools, has been filled by the appointment thereto of Mr. A. J. Denton. Mr. Denton is a graduate of Acadia College, and holds in addition to his university degree a Provincial Grade A license, as well as its equivalent, a Grammar School diploma of the Province of New Brunswick. He is thoroughly devoted to the work of public instruction, in which he has had large and successful experience. Supervisor McKay gives promise of much usefulness in his new sphere.

The next annual meeting of the Provincial Educational Association will, it is expected, be held at Truro, about the middle of July. The Executive Committee has recently been in session making preliminary arrangements and transacting necessary routine business.

By legislation effected a year or two since, the "Halifax School for the Blind" was to a certain extent affiliated with the Provincial system of Public Instruction. The county municipalities are required to contribute to its support as to that of other schools, while the Provincial treasury furnishes a grant proportionate to the number of pupils. At a recent meeting of the Board of Governors, the affairs of the institution were found to be in a satisfactory state. At a largely attended public gathering held in connection with the above meeting, addresses were delivered by Lieutenant Governor Richey, Bishop Binney, the Superintendent of Education, and others. Under the able management of Mr. C. F. Fraser, the Principal, assisted by a competent corps of instructors, the school has attained a status which reflects credit upon the Province.

The annual calender of Pictou Academy, recently published, shows that this well known institution is in a flourishing condition. Its students seem to have their usual success in matriculation competitions at Dalhousie, McGill, Queen's, the Royal Military College, etc.

Another case of a teacher being dragged before the Courts for punishing a refractory pupil is reported. Mr. Fraser, principal of the public school at Acadian Mines, having been thus arraigned, was adjudged guilty of inflicting unlawful and malicious punishment and sentenced to the payment of a fine and costs. We are glad to observe that the decision of the magistrate, which intelligent observers of the trial regard as entirely unsustained by the evidence, has severely shocked the moral sense of the community. Steps were almost immediately taken to indicate in an expressive way the determination of the people generally to sustain the legitimate authority of the teachers. At a large and influentially attended meeting of the citizens, convoked a few days after Mr. Fraser's trial, resolutions were unanimously adopted protesting against the magistrate's decision, indicating Mr. Fraser's course as moderate and rendered necessary by the circumstances, and expressing the strong purpose of the community to secure the maintainance of order in its schools. The resolutions were spoken to approvingly by Mr. Jammé, manager of the Steel Works, Rev. Father Hamilton, Rev. Mr. Logan (Presbyterian), Rev. Mr. Mosler (Methodist), Dr. J. W. MacDonald, W. B. Huestis, Esq., and others.

Mr. Jeremiah Willoughby, a Grade B teacher of many years standing, has issued a small volume, entitled, "Education in Nova Scotia—as it was and as it is; or, Lights and Shadows in the Life of an Old Teacher."

The question of the admission of colored children into the Public Schools of Halifax has not yet been definitely decided by the Board of School Commissioners. As the press of the other Provinces seems to misapprehend the precise nature of the dispute, it may be well to briefly state the case. According to law, the Council of Public Instruction has power to authorize School Boards to provide separate school accommodation for different *sexes* and *colors*, on the recommendation of an Inspector of Schools. In 1876 the Council adopted a minute empowering the Board of School Commissioners of Halifax City to set apart certain schools for the exclusive use of colored children. The Inspector's recommendation on which this permissive minute was founded was obtained at the request of the colored citizens, who at that time preferred separate schools for their children. These, however, have become dissatisfied with the practical working of the arrangement and are urging the Board to break it up. From this statement it will appear that the idea, that colored children are accorded no Educational rights and privileges whatever in Halifax, is far from correct.

The *Eastern Chronicle* (New Glasgow) contains an interesting report of the schools of the town in which it is published. The recent terminal examinations passed off very satisfactorily. A new School building for the accommodation of pupils residing in Ward I has just been completed. The edifice is a handsome and commodious one, occupying a central and commanding location. The class rooms are spacious and bright, and are fitted with desks and seats of the most approved description.

Mr. Alex. McKay, Professor of Mathematics in the Halifax high school, has been chosen Supervisor of the city schools. Public opinion heartily endorses the choice of the Board of School Commissioners. Mr. McKay has a record in connection with public school work of which anyone might deservedly be proud.

A number of aspiring educationists are already mentioned as willing to undertake the duties of the Mathematical chair made vacant by the election of Mr. McKay to the Supervisorship.

MANITOBA.

At a late meeting of the Council of the Manitoba University the question of the affiliation of the new Medical College was discussed. It was moved and seconded, "That the Council has no power to grant affiliation with the University to the body seeking it, but will gladly co-operate with the college in securing its affiliation, with such a representation in the Council as may be deemed equitable." A committee was subsequently appointed to report upon the representation from the Medical Council on the Council of the University.

A special meeting of the Council of the University of Manitoba was held on October 31st to appoint additional trustees for the administration of the estate of the late A. K. Isbister. The six trustees now are—the Bishop of Rupert's Land, Hon. A. G. B. Bannatyne, Mr. Alex. Christie, the Archbishop of St. Boniface, Hon. John Norquay, and Duncan MacArthur, Esq. The library included in the bequest was on motion transferred to the keeping of the Provincial government pending the provision of a place for it by the University.

Rev. Dr. King was duly installed as Principal of Manitoba College on the evening of October 31st., on which occasion a formal welcome was extended to him by the College and Presbytery and an eloquent sermon was preached by Rev. C. B. Pitblado. On the following evening a conversazione was held at the College in honor of the new Principal, at which there was a brilliant gathering from all denominations, and addresses were given by Lieut.-Governor Aikins, U. S. Consul Taylor, Prof. Cherrier of St. Boniface, and others, by whom a prosperous future was confidently predicted for the College under the management of the new principal.

The application of the Medical School recently started here, for affiliation with the University, was considered at a meeting of the Council of the University held at the Education Office on the 17th of December, at which it was resolved that the affiliation of the Medical School with the University would be promoted by the Council and adequate representation of the school be recommended.

Owing to the retirement of Mr. Galton from the principalship of the Collegiate Department of the Winnipeg schools on account of ill health, Mr. J. Hayes Panton, B.A., was appointed to the position in his place, and Mr. A. Bowerman, M.A., was appointed assistant at the same time.

The school census returns just forwarded by the superintendent to the government, show rapid increase in school population and attendance. The number of schools increased since last year from 182 to 309, and the school population from 8,935 to over 12,000; the attendance showed a proportionate increase.

At a meeting of the Board of Education on December 14th., an important change was made in the regulations affecting the Normal School, and provision was made for the inspection of Collegiate work in the province by the appointment of Professor Hart, M.A., B.D., and Canon O'Meena, M.A., as inspectors. The principal changes affecting the Normal Schools are as follows:

6. The sessions of the Normal School shall be as follows:—One session of five months, from the first of November to the end of March following, in the City of Winnipeg; the second session shall consist of institutes for the instruction and training of third-class teachers only, and may be held at such places in the province and for such periods as the Board of Education may determine; provided that the Board of Trustees at each place selected be able to offer, through the local inspector, suitable accommodation and to secure the attendance of at least ten students for each course.

Winter Session.—1. Applicants for admission to the winter session of the Normal School shall, through the local inspector, notify the Superintendent of Education of their intention one month before commencement, and, in order to be admitted, must present proof of good moral character; must be, if males, eighteen, if females, sixteen years of age; must possess literary qualifications, corresponding to the requirements for promotion in Standard IX. of the Programme of Studies for use in cities and towns, and must declare their intention of teaching for at least two years in the Province as a condition of receiving a normal training.

2. The students in training shall be required, during the session, to place themselves under the care of one of the clergymen having pastoral charge in the city, to board only at such places as may be approved by the superintendent, and to be faithful and punctual in the discharge of all their duties.

3. Students whose deportment and work are favorably reported upon by the principal at the close of the term, and who succeed in passing a satisfactory examination, shall be awarded diplomas authorizing them to teach for one year without any other certificate; to teach four years after passing the non-professional examination for third-class, grade A; to teach during the pleasure of the board after passing the second or first-class non-professional examination, except that candidates for first-class professional certificates must, in addition to normal training, show evidence of one year's successful teaching.

4. Those obtaining diplomas at the close of the term, whose homes are not in Winnipeg, shall receive their actual travelling expenses incurred in travelling from their homes in the Province and back, together with such additional sum toward the payment of other expenses connected with their attendance, as may be available from the funds at the disposal of the Board of Education for that purpose, but not to exceed in any one case at the rate of four dollars per week.

Summer Session.—1. Candidates for admission to a course of training, as provided by these regulations, shall be required to present the same evidence as to age and character required for admission to the winter session, and must possess literary qualifications at least equal to those required for a third-class certificate, grade B.

2. They shall be punctual in their attendance upon such classes as may be established for their benefit, and shall assume duty in any school or schools assigned to them for practice.

3. Students whose deportment and work are favorably reported upon at the close of the course, shall receive diplomas which, in connection with third-class non-professional certificates, shall authorize them to teach, in the case of Grade A, for four years, and in the case of Grade B, for two years.

Ruskin says: "An educated man ought to know three things"—not the three R's, you will observe—"first, *where he is*—that is to say, what sort of a world he has got into; how large it is; what kind of creatures live in it, and how; what is it made of, and what may be made of it. Secondly, *where he is going*—that is to say, what chances or reports there are of any other world besides this; what seems to be the nature of that other world. Thirdly, *what he had best do under the circumstances*—that is to say, what kind of faculties he possesses; what are the present state and wants of mankind; what is his place in society; and what are the readiest means in his power of attaining happiness and diffusing it. The man who knows these things, and who has his will so subdued in the learning of them that he is ready to do what he knows he ought, is an *educated* man; and the man who knows them not is uneducated though he could talk all the tongues of *Babel*."

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

PERTH.—The annual meeting of the teachers of the county of Perth was held in Princess Hall, Stratford. A large majority of the teachers were present. The programme was not so varied as usual, and the resident teachers in connection with the association did not figure so prominently as on previous occasions. However, a profitable meeting was enjoyed, and we have no doubt every earnest and observing teacher went away with renewed energy, and more thoroughly equipped for the discharge of his duties. The leading part in the programme was taken by Dr. McLellan, inspector of High Schools and Mr. G. W. Ross, inspector of Model Schools, who are acknowledged to be two of the most able, earnest and practical educationists in the Province. Mr. Rothwell of Listowell occupied the chair during the whole session with ability and success. *Geography in Public Schools.*—At the forenoon session on Thursday, a valuable paper on this subject was read by Mr. C. W. Chadwick, principal of the Stratford Public School. He recommended that the subject be introduced by object lessons, and pointed out how teachers could make the subject pleasant as well as profitable. He thought it better to teach a few important things well rather than cram the mind of the pupil with meaningless names, nine-tenths of which they never hear again after leaving the school-room. He also suggested that the head-teacher take the papers into the school and ask the pupils to locate the places mentioned in them. *How to Teach an Object Lesson.*—Mr. G. W. Ross illustrated this subject in a highly interesting way. His manner of dealing with the subject was most rational and simple and all the teachers who listened to him must have felt that they could go back to their schools and teach this subject more intelligently and profitably. The impression invariably formed in listening to Mr. Ross, and which he wishes distinctively and emphatically to convey, is that children are variously constituted as to mental endowment and aptitude, and this prime consideration must always be kept in view by the teacher who expects success. He made the division of school days as follows :—childhood, 6-12 ; youth, 12-16; manhood, 16-21. In childhood the most prominent faculties to be appealed to in imparting instruction, are perception and sensation ; in youth, conception and imagination ; and in manhood, judgment and reason. In childhood you have to teach scholars by observation ; in youth by representation ; and in the next stage by demonstration. How to do it in this way he beautifully and clearly explained. Mr. Ross maintained that every teacher to be successful must have a knowledge of mental science including the temperaments and disposition of children. Dr. McLellan also urged very distinctly the necessity for the possession of this knowledge by the teacher. Miss Shannon of Mitchell was then called upon for a reading and, in her usual pleasing, and attractive style, rendered Tennyson's "May Queen." *A Fine Lecture.*—In the evening Mr. G. W. Ross delivered a lecture entitled "Should we cultivate a national sentiment ?" Mr. Ross is a very eloquent, forcible and pleasing speaker, and his lecture was brimfull of good things. We know of no one who is more enthusiastically received by the teachers of this county, or, we venture to say, by the citizens of Stratford, who have had the pleasure of listening to him. *Friday's Proceedings.*—In dealing with "Elementary arithmetic" Dr. McLellan showed by his rational and common sense method that numbers are capable of being made to possess positive attractiveness to the youthful mind. By adopting the Dr's method the teaching of introductory arithmetic would become not a matter of dull routine, but one of vital interest and value. In order to teach this successfully the teacher must have the faculty of imaginative representation, and be able to make mental pictures to the minds of the scholars. Scholars are variously constituted as to the mathematical aptitude, and the best methods of mental development were clearly and forcibly pointed out. The principle of subtracting, so dark and incomprehensible to scholars generally, was explained and clearly illustrated by the use of simple marked blocks. The teachers who were present watched with pleasure and uninterrupted interest Dr. McLellan's close reasonings and helpful suggestions, receiving new ideas and catching a spirit of enthusiasm vastly important in arithmetical teaching. "By the Alma after the Battle," a very fine and pathetic selection, was read by Miss Knox of St. Mary's, in a most pleasing and effective manner. *The Art of Questioning.*—This old theme was then taken up by Dr. McLellan and dealt with in a fresh and vigorous way. The art of questioning was the true test of the teacher's success—a prudent question in fact is half knowledge. The object of questioning was : (1) to discover the pupil's knowledge ; (2) to fix knowledge ; the nature of mental impressions was here interestingly explained ; (3) to incite interest ; (4) to discover misapprehensions and remove difficulties ; (5) to extend knowledge ; (5) to arouse the dull. The qualifications of a good questioner were enumerated as : (1) the power of analysis ; (2) accurate and minute knowledge ; (3) close preparation ; (4) full appreciation as to condition of the pupil's mind as regards capacity and attainments ; (5) vivacity—the enthusiasm of humanity ; (6) practice in teaching. Each of these points was amply, vigorously and sometimes humorously illustrated. *Red Tapeism Illustrated.*—Mr. Rothwell, principal of the Listowell public school, whose name appeared in the programme linked with "Red Tapeism" somewhat sarcastically remarked that he was ignorant of what was intended. He acknowledged no such term in connection with our educational matters or their management. He pointed out a few of what he regarded as imperfections in our educational system, such as the extending of third class certificates ; the unreasonableness of the Normal school term ending in the middle of a school term, thus preventing graduating teachers getting immediate employment ; and the existence of the superanuation fund. *Imperfect Reading.*—In speaking of reading Dr. McLellan said that that of Canadians was characterized by slovenliness arising in no small degree from the slight importance attached to it in High Schools and colleges. The majority of teachers are not competent to teach reading as an art, having had no sufficient instruction in the matter themselves. Another difficulty has been that school readers were constructed more with a view to imparting knowledge than for the purpose of teaching reading. It cannot be effectively taught without study and application on the part of the teacher, neither by lecturing nor by laying down rules but by giving the scholars models to imitate. *Another Lecture by Dr. McLellan.*—The teacher and the parent in relation to the school was the subject of Dr. McLellan's lecture on Friday evening. The grand principle underlying our Canadian system was that of equality of opportunity. A comparison was instituted as to the comparative merits of the Canadian and American systems, and superiority claimed for our own in many respects. Popular ignorance is the bulwark of despotism and a nation's success and glory are due to her intelligence. The school is the source from whence this great power must emanate. The value of national education as a means of progress in industrial arts was indicated, as was also the complete revolution in the methods of teaching in the last score of years. The teacher should have a just conception of the aims, realities and grand possibilities of life in order to ensure success in his profession. He ought to possess an accurate knowledge of the laws that govern the mental faculties, must have general culture, besides strong moral convictions and reverence for what is good and true. *Closing Session.*—Saturday's meeting was occupied mostly by a somewhat animated discussion on the question of school readers. The representatives of the rival firms were first heard—Mr. Moran representing Gage & Co , and Messrs Donly and Sullivan, Campbell & Son. A number of the teachers expressed their views on the question, but as many had not examined the two series it was desired to refer the matter to a committee to bring in a report next meeting of the association. A motion by Mr. Macgregor to this effect was defeated, and a resolution that the association recommend the adoption of the Gage series of readers was declared carried. Teachers, ex-teachers and model school students were requested to vote, but many of those who wished to defer action refrained from voting. *Election of Officers.*—The only item of business that was afterwards transacted was the election of officers, which resulted as follows : President, Mr. C. A. Mayberry, Stratford high school ; vice-president, Miss Campbell ; secretary-treasurer, Mr. C. W. Chadwick, Stratford public school. Executive committee, J. A. Harvey, D. G. McNeil, C. S. Falconer, and Misses Ross and Shannon.

WEST VICTORIA.—The semi annual meeting of the West Victoria Teachers' Association, was held in the school house at Fenelon Falls, Friday and Saturday 5th and 6th Oct. 1883. The president, Mr. H. Reazin in the chair. Rev. Mr. Wright was asked to take his subject "Abuse of words," but instead he read an interesting paper on "The use of words" illustrated by copious passages from Scripture. Mr. J. W. Graham of Fenelon Falls was next called upon to give his subject "Synthesis". He highly recommended the early use of Synthesis, in preference to Analysis as a means of teaching composition. Messrs Millar and Scarlett representatives from the rival companies, W. J. Gage & Co. and Campbell, were then introduced and asked to speak in behalf of their respective companies. It was moved and seconded that the following committee be appointed to examine the two series of Readers before the convention and to report on Saturday, viz. Rev. Mr. Pomeroy, B. A., J. W. Graham, L. Gilchrist, F. Nerrman and D. C. Smith. Convention was then adjourned. In the evening a large audience assembled in the Methodist church, where an interesting programme, consisting of songs, readings, and recitations were well rendered by the teachers of Fenelon Falls. Rev. Mr. Pomeroy, B. A., head master of the Oakwood High School, delivered an able address on "True Culture." A vote of thanks was tendered the lecturer, and the meeting adjourned. Convention met at 9.30 on Saturday morning. The chairman of the committee was asked to give his report. Mr. Pomeroy reported ; "Your committee having examined the two series of readers placed before them, recommend the adoption of Gage's series to the third book using it for the 3rd class junior, and Campbell's series for the higher classes, beginning with the third book for the 3rd class senior. It was moved and seconded that the report of the committee be received and adopted. Carried. Mr. Grant of Oakwood H. S.

then took up the subject "Ventilation." This he did in a clear and masterly style, giving many useful hints for the proper ventilation of rooms, and showing the bad effects of breathing impure air. He was followed by the Rev. Mr. Logan who gave an excellent lecture on the "Use of the Bible in Schools," in which he recommended that scriptural teaching shonld be a prominent factor of our school programme, It was moved and seconded that Mr. Logan's address be printed in our local papers. Carried. Rev. Mr. Watch next delivered an eloquent and pointed address on "Intellectual Growth." He gave a few of the most important facts requisite to the intellectual growth from childhood to manhood. Dr. Wilson then came forward with the subject "Hygiene"with which he dealt in a very instructive and well arranged paper. He showed how, in many ways, health could be maintained by giving proper attention to the teeth, clothing, cleanliness, sleep, meals, and recreation. Each of the subjects was fully discussed by the teachers and others present immediately after it had been given. A vote of thanks was tendered to each of the foregoing gentlemen for their excellent lectures. Convention adjourned.

Nova Scotia.—The third annual meeting of the Teachers' Association for District No 6 (counties of Antigonish and Guysboro) was held at Antigonish on the 23rd and 24th of August. The sessions were held in the spacious mathematical lecture-room of St. Francis Xavier College, kindly placed by the Faculty of that Institution at the disposal of the association. The President, Inspector McDonald, introduced proceedings by a short but exceedingly appropriate address, in which he expressed regret that owing to unavoidable circumstances the Superintendent of Education would be unable to favor the Association with his presence. The first exercise was a deeply interesting paper on the "Unitary System" (in arithmetic,) by Mr. C. W. McDonald, who explained with great lucidity the superiority of that system to memorized rules and their purely mechanical application. The discussion which arose was very instructive, being participated in by Messrs Burke, McEachern, W. D. Cameron, W. McLean, John Chisholm, and Alex. McKinnon. The latter strongly commended Hamblin Smith, and Kirkland & Scott as text books. Mr. Jos. A. Chisholm then read an interesting paper on "Method." The idea was developed with great clearness that the value of studies as instruments of mental discipline and growth is largely dependent on the methods by which instruction is given. On this paper, too, a profitable conversation was held. The "Art of Questioning" was the subject of the next essay read by Mr. A. D. Thompson. In a highly lucid and logical manner, Mr. Thomson discussed the various methods, proper and improper, according to which the questioning of pupils is conducted. On the principle that *exercise is the grand law of development*, it was shown that answering *suggesting* questions had a *relaxing*, rather than a *stimulative* effect. The subsequent discussion, which was very generally shared in, emphasized the chief suggestions of the essayist. Mr. Alex. Beaton followed (on the morning of the 24th) with a paper on the "Disadvantages under which the Associations labor under our present School System." Among these allied disadvantages the writer specified particularly the difference of vernacular often existing between the teacher and his pupils. He favored making a knowledge of French compulsory upon all teachers seeking employment in sections where the French language prevails. Mr. Burke opposed, and Mr. McKinnon favored Mr. Beaton's views. The next paper presented was on "Parental Indifference," by Mr. Burke. The evil alluded to was largely due, Mr. Burke held, to a natural reaction for extravagant ideas formerly held as to the prospective benefits of our educational system. Not finding certain highly colored pictures realized, parents were hastily induced to undervalue the undoubted advantages of education. The writer argued that the best corrective would be increased attention to practical studies. In reply to some of the arguments adduced in favor of this position, Mr. Wm. McIsaac vindicated at some length the claims of classical study. Mr. A. J. McEachern then proceeded to discuss the "Importance of Language Study" in a paper which secured the deepest attention of the Association. Opposing theories of education under the respective watchwords, "Utility" and "Culture," were analytically contrasted and a general conclusion drawn in favor of the latter. Mr. A. A. McDonald, who had promised a paper on "Mistakes in Teaching," being unfortunately absent on account of illness, the Rev. Dr. McNeil kindly acceded to the wishes of the Association and spoke on "The progress of scientific research which culminated in the discovery of the law of gravitation by Sir Isaac Newton." The learned Doctor's reasoning went to show that great discoveries generally are not the work of one man or of one age ; that too often the preliminary toil of patient workers is overlooked in the blaze of glory which follows the perfected discovery ; that Copernicus, Kepler, and Galileo preceded Newton and made his triumphs possible. The address in which these views were logically and eloquently developed, elicited warm eulogium from all who heard it. Some matters of general educational interest were considered. A resolution was passed, though not without energetic opposition from an influential minority, in favor of substituting for our present school term, a simple term embracing the entire school year. The following appointments were made : Vice-President, Mr. Alex. McKinnon: Secy. and Treasurer, Mr. W. F. Kiely. Executive Committee,—Messrs D. D. Burke, A. J. G. McEachern, E. B. Smith, Wm. McLean, George Cameron, Wm. D. Cameron, A. J. McGillivray. After some debate a motion was unanimously carried to hold the next meeting of the Association in the town of Guysboro. The meeting then adjourned until the following day. A resolution respecting teachers salaries was passed and Messrs Wm. McIsaac, A. J. G. McEachern and W. F. Kiely were appointed a committee to prepare a circular on teachers' salaries. A resolution by Mr. Wm. D. Cameron was passed to the effect that in schools where the ratepayers and trustees fail to furnish the necessary apparatus the Public School Inspector should be legally empowered by the Council of Public Instruction to purchase these appliances out of the County Funds due the section thus unprovided. After a hearty vote of thanks was tendered the President, Mr. Inspector McDonald, for the efficiency with which he presided over the meeting and the interest he took in promoting the objects of the Association, the meeting adjourned *sine die*.

West Bruce. The annual meeting of the Teachers' Association was held Thursday and Friday, October 18th and 19th. The meeting was opened with devotional exercises. President in the chair. After the usual business, a circular was read from Mr. Clendenning, Inspector, East Bruce, in reference to the choice of a new series of readers. It was moved by Mr. Powell, seconded by H. H. McKague, that a copy of the minutes of the Provincial Association be mailed to each member free of charge. Carried. The question of the library was taken up and Neil D. McKinnon moved, seconded by G. B. Kelso, that Township Teachers' Associations have the privilege of obtaining, at one time, from the County Association a number of books from the library, equal to twice the number of teachers in the township ; these books to be retained by the Township Association for a period of six months. At each meeting of the County Association these books shall be returned and another selection of books made. That the President and Secretary of each township association shall be held responsible for the care and the return of the books at the proper time. Also, that teachers in townships where associations are not now in existence, be entitled to the same privilege, providing they organize themselves into a body and appoint two responsible persons as security for the proper care and return of books. Moved in amendment by H. C. Sutherland, seconded by James McKinnon, that the matter be laid over until next meeting. Amendment carried. A further discussion ensued, in which it was proposed to sell the library and furnish members with educational periodicals free of charge. It was then moved by D. F. Ritchie, seconded by Mr. Freer, that the representatives of the two series of readers—the Royal and the Canadian, be allowed to address the meeting. Carried. It was also decided that the vote of the Association upon this matter be taken by ballot. Mr. Moran, agent for the Canadian series then addressed the meeting. He was followed by Mr. McGregor, agent for the Royal series. Mr. D. F. Ritchie spoke at considerable length, strongly urging a decision in favor of the Canadian series. A prolonged discussion was, however, cut short by Mr. Freer's suggestion that a committee be appointed to examine the books and report. A committee was then appointed, consisting of Messrs Campbell, Freer, Powell, Ritchie, McLean, McKague, and Misses Johnson, Cairns and Anderson, who met at 8 o'clock a. m., Friday. This rather monotonous matter was then relieved by the introduction to the audience of Mr. Bengough, who suddenly transformed the atmosphere into one of merriment. On Friday morning the neglected programme received attention. A. B. McNeill dealt with the subject of "Whispering in School : its Prevention and Cure." This was ably handled and drew forth some valuable suggestions from others. "Local Geography" was then introduced by G. B. Kelso, who, in opening, strongly advocated the necessity of having young teachers take part in the work of the Association, and the desirability of working in unison in the various sections. Mr. Kelso then disposed of his subject in a style of considerable eloquence, after which a friendly discussion followed The audience was then entertained by Miss Powell who, in an essay of thrilling interest set forth her sentiments on "Duty." The effusion was a rare specimen of beautiful and striking thoughts, expressed in choice language, and deservedly elicited warm admiration. A hearty vote of thanks was tendered Miss Powell, coupled with a request that the essay be published in the local papers and also in an educational periodical, to which Mr. Powell replied on behalf of his daughter. Miss Chapman also read an essay of considerable merit, entitled "What to Read." She also received a vote of thanks, coupled with a similar request. Mr. H. H. McKague then took up "Mathematical Geography," illustrating by a diagram his method of teaching the subject, and proceeding from junior to senior classes. Miss Jessie McLean read, in her usual enjoyable manner "My Own Place." "The Leper" by Willis, was also read by Mr. Geo. Brown with considerable ability. Tennyson's "Despair" was ably rendered by Mr. Powell, and Miss Thomson read, in lighter strain, a selection from "Hiawatha." The Committee on readers then reported as follows :—Your Committee, having carefully considered all the circumstances that should influence teachers in selecting readers, beg to recommend the Canadian Readers, as they possess the essential features

of reading books to a much greater extent than the Royal Readers." In the discussion that followed, Messrs. Powell, Smith, Freer, Campbell and Denholm took a prominent part. On motion of Messrs. Powell and Ritchie a vote was taken by ballot and the report of the Committee was adopted—the vote standing as follows :—Canadian, 43, Royal, 12, blank 5.—It was then suggested by Mr. Freer that the vote be made unanimous, which suggestion was carried out. During the afternoon Prof. Marshall acted as a substitute for Mr. Bengough in relieving the tedium of business routine, and sang in his own happy and effective style three songs entitled, "Darby and Joan," "Jack's Yarn' and "Nelson's Watchword," the latter by a strange coincidence, harmonizing with the key-note struck in Miss Powell's essay, and followed by Miss McLean's reading. C. J. Cameron illustrated his mode of Map Drawing, which was well received. "The Teacher out of School" was the subject of an address by Mr. Powell, who gave advice to young teachers upon their deportment when off duty—valuable advice gained by his own experience. The report of delegates to the Provincial Convention then followed, and after a hearty vote of thanks to Prof. Marshall, the meeting was closed by singing the National Anthem. A. M. JOHNSON, Secretary, *pro tem.*

OXFORD.—The twelfth session of the Teachers' Institute was held at Woodstock, and the attendance of teachers of both sexes from every part of the country was large, proving that there is a very wide interest taken in these associations, and that the work done by them is regarded as important by the profession. The morning of Thursday was taken up by a most interesting class conducted by Mr. Dennis, of the Model School, Woodstock, illustrative of the best method of teaching the tablets ; and by Mr. Deacon of the Ingersoll Model School, upon "Some Points in School Management." Mr. Edgington, of Mount Elgin, also gave a dissertion upon "Right Angles." In the afternoon, Mr. Dennis in a similar manner took up "Multiples and Measures." Miss Gardner, of the Ingersoll Model School, read a lively and clever essay and Mr. Deacon dealt in an entertaining way with the subject of "School Hygiene," one of very great importance to teachers and pupils everywhere. In the evening it was the intention of the Institute to hold a musical and literary entertainment but this was not carried out, and owing to the unfavorable state of the weather nothing more than a somewhat informal meeting of a few of the teachers took place, where some matters connected with the profession were talked over. The morning session on Friday was enlivened by a discussion upon the relative merits of the Gage and Campbell series of school readers. Mr. Campbell on behalf of the Royal Readers, and Mr. McKay, representing the Canadian Readers, both addressed the Convention. The result of the consideration of this question was a vote expressive of the preference of the Convention for the Gage series. Mr. Deacon dealt with the question of "Writing" and, after dinner, Mr. Richardson, of Blandford, took up the question of "Literature." Early in the afternoon the Convention adjourned to enable the teachers to attend the meeting of trustees in the town hall. The following are the officers of the Institute for the coming year : President, F. W. Marchant, Ingersoll ; Vice do., V. Stock, Tavistock ; Secretary-treasurer, Miss Gardner, Ingersoll ; Management Committee, Messrs. Cole, Oliver, Richardson, Robinson and Burke. *Trustees' Meeting.*—A meeting of the representatives of the various Boards of Trustees throughout the county had been called by Inspector Carlyle for the same day, Friday. When the meeting assembled at the town hall there were about thirty trustees present. Mr. Carlyle opened the meeting, explaining that it had been called by himself by circular. The circulars asked for one trustee from each section to be appointed to meet as a conference to decide upon one series of school readers, and attached to the circular was a form to be filled up binding the boards to the decision of the delegates sent. After some preliminary talk, Mr. Carlyle was appointed chairman and Mr. Cairnes secretary of the meeting, and the certificates of those present were handed in. Several trustees who had not been sent as delegates, or who received no regular notice of the meeting, were present. The general feeling as expressed by those present who had anything to say was that so small a meeting could not represent the schools of the county—numbering in round numbers 120, and it was resolved to adjourn until one o'clock. In the afternoon the number of delegates was increased to between forty and fifty, a number of sections being represented by their teachers. It was resolved to allow the representatives of the rival Readers thirty minutes each to address the conference Mr. Campbell, the senior member of the firm of Jas. Campbell & Son, first spoke for the Royal Readers of the firms of Nelson and Campbell & Son, while W. J. Gage & Co. were represented by J. McKay, a University student, for some time a teacher of West Zorra, of which township he is a native. When they got through, the question arose whether or not any action should be taken at such a meeting. Wm. Grey, Esq., a member of the Woodstock High School Board, asked to be heard, a request which was courteously granted. He took the ground that it would be absurd for such a meeting to decide upon any series. Those present represented only one-third of the schools of the county. Woodstock, with a school population over six hundred, had not had the opportunity of sending a delegate. Besides this, very few had examined both series to compare their respective merits. Several trustees warmly agreed with Mr. Grey, and it was moved that the conference adjourn for a month in order to have a full representation and to enable all present to compare the rival series. Several teachers present urged that a decision be come to at once, as some of the schools were awaiting the day's action to know what series of readers to adopt. The Inspector favored one series for the county, and the arrival at a decision at this meeting as to which it should be. During the discussion it transpired that few if any of the trustees present had seen more than one series, or were prepared to vote intelligently from a comparison of their merits. Upon a vote being taken twenty trustees favored adjournment, a majority being against it. A motion in favor of recommending Gage's "Canadian Readers" as the series of the county was then put. Thirty-four delegates voted for it, a few against it, and the others abstained from voting. The meeting then adjourned.

REVIEWS.

DEVELOPMENT OF ENGLISH LITERATURE AND LANGUAGE. By Alfred H. Welsh, M.A., Member of the Philosophical Society of Great Britain, etc. Second edition. *S. C. Griggs & Co., Chicago.*

"A nation's literature is the outcome of its whole life. To consider it apart from the antecedents and environments which form the national genius were to misapprehend its nature and its bearing. Its growth in kind and degree is determined by four capital agencies. RACE, or hereditary dispositions ; SURROUNDINGS, or physical and social conditions ; EPOCH, or spirit of the age ; PERSON, or reactionary and expressive force." The author has taken a "new departure" in the treatment of his subject, and students of English literature will gladly concede that he has been eminently successful in realizing his broad and philosophic conception. In the loftiness of its aim, and in the logical character of its method, the work rivals that of Taine ; and surpassing it in precision of classification and directness and lucidity of statement. We think, to use the words of Oliver Wendell Holmes, that "the author must receive a hearty and deserved welcome from very many readers who are groping their way through the forests of literature, and to whom he comes as a guide with a staff to support their steps, and a lantern to illuminate their pathway." The work is published in two volumes 8vo., $5 ; or in one volume (University Edition) 8vo., unabridged, for $3. The publishers announce that they will send specimen copies for examination *prepaid*, the University Edition for $2, and the two volume edition for $3.34.

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A new number of the Journal of SPECULATIVE PHILOSOPHY, edited by the eminent educationist, William T. Harris, has just reached us. It contains *The Centennial of the Critique of Pure Reason*, by Kuno Fisher, the famous German professor of metaphysics, translated by Benjamin Rand; *Gœschel on the Immortality of the Soul*, translated by Susan E. Blow; *Fichte's Facts of Consciousness*, translated by A. E. Krœger; *Man, a Creative First Cause*, by R. G. Hazard; *Philosophy in Outline*, by the editor; besides Notes, Discussions, and Book Notices. This exceedingly able quarterly deserves a large measure of support from all who think.

Amringe's Revised Edition of DAVIES'S ELEMENTS OF SURVEYING.

This is a new edition (1883) of an old and popular book. It has all the excellencies of the old edition with many new ones. It gives a full description and explanation of the instruments used in plotting, much new matter on magnetic declination, many new and useful tables, especially in the matter of determining the time meridian with compass or transit, and a full account of the American system of surveying public lands. Mining surveying has in this edition received that treatment its importance demands. A special feature in the work is its practical character. Every department is illustrated by numerous practical examples, and especially in the higher parts, by accounts and descriptions of work actually done by eminent government surveyors.

The lithographical appearance of the book is excellent, and it abounds in elegantly engraved wood-cuts.

Surveying is made of so little account in our Canadian school system, that it seems idle to recommend a book upon the subject. It seems to us that a practical acquaintance with the simplest parts of its elements might be demanded of our first-class teachers. This book would hardly do for such an object. It goes too far, and, in our opinion, demands too little an acquaintance with those branches of pure mathematics upon which surveying as a science depends. For Canadian use we should prefer a book in which the treatment of logarithms and Trigonometry would be dissociated from that of surveying proper, and then a book less extensive on surveying prescribed. To the intending surveyor, however, we recommend this book as the best we know on the matter it treats of.

AN EPITOME OF ENGLISH HISTORY, WITH QUESTIONS FOR EXAMINATION. By S. Agnes Kummer, revised by *A. M. Chandler.*

Most school histories are too bulky and badly arranged to be suitable for class instruction, especially in elementary work. This manual claims to present only "the principal dates and facts" of English History, in the "condensed form," and if, as its compiler claims, a thorough knowledge of them, "adds greatly to the facility and enjoyment of more extended study," the work may well claim the attention of those for whom it was designed. The management of the matter is good. After the genealogy of each Sovereign, briefly and well defined, which is a good feature, is a skeleton outline of the principal events of the reign, followed by notes on those deemed worthy of extended notice. In most cases the notes are all that could be desired, though, occasionally minor matters are treated of at greater length than the salient points of British History. The devotion of Eleanor to Edward I., to mention one instance, claims a page, while the Magna Charta is disposed of in rather less than three (3) lines. The thousand two hundred and forty questions with which the manual closes, asks for all, perhaps more, information, than the subject matter contains, and, in the work intended for beginners, may be a merit.

HISTORY OF ANCIENT EGYPT. By George Rawlinson, M. A., Camden, Professor of Ancient History in the University of Oxford; etc., etc. Two volumes; 8vo, gilt tops. *T. Y. Crowell & Co.*, Astor Place, N. Y.

This great work of a distinguished historian needs no commendation at our hands. It is enough to say that the author has admirably succeeded in his design of supplying a "crying need of English literature —viz., an account of Ancient Egypt, combining its antiquities with its history, addressed partly to the eye, and presenting to the reader, within a reasonable compass, the chief points of Egyptian life—manners, customs, art, science, literature, religion—together with a tolerably full statement of the general course of historical events, whereof Egypt was the scene from the foundation of the monarchy to the loss of independence." The English edition appeared in 1881 at a price of three guineas (over $15) for the two volumes; the American publisher has produced an edition equal or superior to the English edition, at the price (retail) of $6 for the two handsome volumes. The work is beautifully illustrated, containing ten plates and about 450 wood-cut illustrations. We hope that this beautiful and fascinating work will find a place in every high school, and teacher's library.

TEXT-BOOK OF POPULAR ASTRONOMY; for the use of Colleges, Academies, and High Schools. By William G. Peck, Ph.D., LL.D., etc. *A. S. Barnes & Co.* New York. Pp. 330, 12mo.

This new book on astronomy is intended to present in compact form the facts and principles of the science that may be required by the young student or the general reader. Of course it is not without mathematical formulæ; but the purely mathematical part has been printed in smaller type, and may be omitted by the general reader without injury to the unity of the work. The work is divided into sixty chapters:—*Preliminary Principles, Of the Sun, The Solar System, The Earth, The Moon, The Sun and Planets, Eclipses, Of Tides, Of Calendars, Planets and Satellites, Comets and Meteors, The Sun and the Stars.* From this may be gathered the general scope of the work, and the arrangement of its matter. The book is well adapted for high school work, and for the purpose of the general reader; and we confidently recommend it to the attention of the readers of the JOURNAL.

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THE BIOGRAPHICAL MAGAZINE. Vol. I. No. 1. *New York: The Pictorial Associated Press.* The first number contains twenty-six fairly good portraits with short well written sketches. Among the faces we find Bismarck, Ben. Butler, Fred Douglas, Jules Ferry, Alfonso XII., Lord Coleridge, Luther, and Harriet Beecher Stowe. We commend this magazine to teachers who wish to make their pupils acquainted with persons and things rather than mere names and "dead vocables." The price is only one dollar per annum,—twenty-four pages. A class could easily raise that amount by a three cent subscription, and one of these brief biographies, read in five minutes each day, would do more good than half an hour's talk about the "extension of the predicate." Let unbelievers try the experiment.

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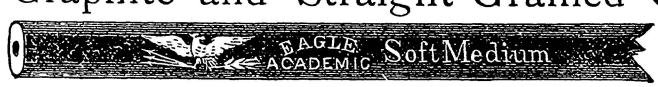
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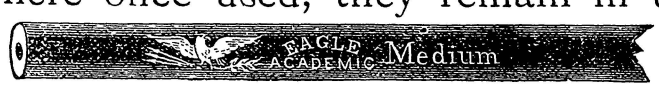
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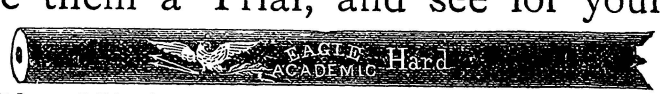
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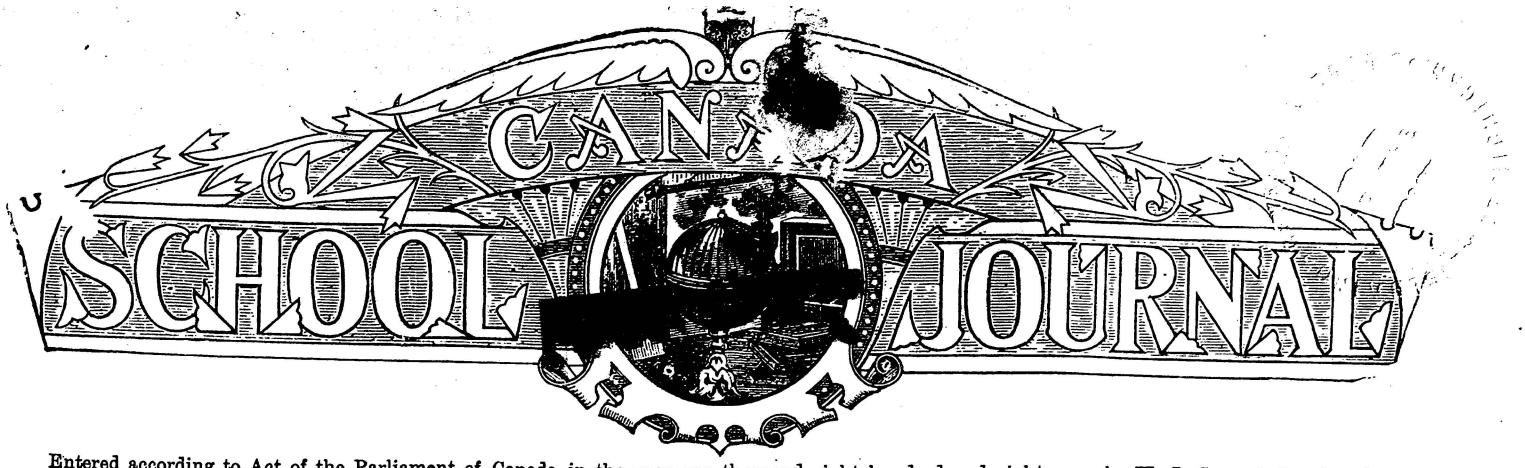
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Table of Contents.

EDITORIAL :—
- William Crockett, A. M..... 25
- County Model Schools..... 26
- The University Question..... 26
- Notes and Comments..... 27

MATHEMATICAL DEPARTMENT..... 29

CORRESPONDENCE..... 31

SPECIAL ARTICLES :—
- Notes of Talks on Teaching..... 33
- Practical Education..... 35

PROMOTION EXAMINATIONS..... 37

PRACTICAL DEPARTMENT :—
- Artificial Stupidity..... 39
- Arithmetical Matches..... 40
- Script or Printing, Which?..... 41
- Her Specialty..... 41
- The Best Methods of Punishment..... 42
- The Study of Mental Arithmetic..... 42
- Six Principles of Pedagogy..... 43

NOTES AND NEWS :—
- Ontario..... 43
- Nova Scotia..... 45

READINGS AND RECITATIONS :—
- The Boy's Complaint..... 46
- Speaking to the Point..... 46

TEACHERS' ASSOCIATIONS..... 46

REVIEWS..... 48

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The Canada School Journal.

VOL. IX. TORONTO, FEBRUARY, 1884. No. 2.

WILLIAM CROCKET, A.M.

CHIEF SUPERINTENDENT OF EDUCATION FOR NEW BRUNSWICK.

As previously intimated in the JOURNAL there has been a change in the Chief Superintendency of Education in New Brunswick. Dr. Rand, the late able Superintendent, has become Professor of the Principles and Practice of Education in Acadia College. He was succeeded in November last by William Crockett, A.M., late principal of the Provincial Normal School at Fredericton. Thus we have the almost simultaneous appointment of two practical educationists to the head of educational affairs in New Brunswick and in Ontario. This is surely a good omen for the future of this Dominion.



Mr. Crockett's career is so well known to our readers that it is only necessary to refer to it very briefly. He was born in Forfarshire, Scotland, and attended the grammar school there until his matriculation at Aberdeen in his sixteenth year. He spent two years at King's College then, and subsequently completed his collegiate course at the University of Glasgow, taking a creditable rank in classics and mathematics throughout his university course. He was early engaged both as private tutor and in the parochial schools, and took the full two years' course at the Established Church Normal School in Glasgow. He came to Canada in 1856 to take charge of the Superior School at Campbelltown, N.B. Here he taught for five years, and was for one year Inspector of Schools for the county of Restigouche. In 1861 he was appointed principal of the Presbyterian Academy just established at Chatham, and remained there for the next nine years. Here he first became a teacher of teachers in a branch Training School which was established for the Northern Counties in 1867. In 1870 Mr. Mills resigned the principalship of the Provincial Training School at St. John and Mr. Crocket was appointed principal of the Provincial Normal and Model Schools then established at Fredericton. In 1877 the school was removed into the spacious new buildings provided for its accommodation. In 1865 the University of New Brunswick conferred upon Mr. Crockett the Degree of A.M., and for ten years he has been one of the Examiners for Degrees in that institution.

Mr. Crockett unites in a remarkable degree the *sauviter in modo* with the *fortiter in re*, being possessed of winning manners and a pleasing address as well as vigorous, well-defined characteristics. Our readers are familiar with his style as a writer on education. The following extracts from his address at the opening of the new Normal School at Fredericton give a fair sample of his tone and the spirit with which he enters upon the important work of his present office.

"The most earnest effort of the student-teacher should be directed, not to the solution of mathematical problems—though these are not by any means to be neglected—but to the study of the great principles of education and the methods of teaching most in harmony with these principles; to the study of how the native powers of the mind may be developed and its own inherent forces trained to assimilate the materials of its growth; how the will, which is the force behind the scenes and the moving spring of all, may be stirred to action, governed and taught to govern itself. * * * * *

"But while much may be done to discipline and furnish the intellect, I hope that the great feature within these walls will be the influence upon character by developing and strengthening the true spirit of the teacher's work; by joining with broad views lofty and pure inspirations; by giving depth and fixedness to principles; by bringing conscience to bear upon the grand aims and the minute details of the teacher's vocation; by kindling in the heart that love and affection for the young,

which where'er the teacher goes,

'Will make a desert blossom as the rose.'"

The appointment from their own ranks of such a competent man to the most responsible educational position in his province, will be a source of pride and gratification to every teacher on this continent.

COUNTY MODEL SCHOOLS.

Among our correspondence will be found a timely suggestion from Mr. Chadwick to which we respectfully invite the attention of the "powers that be." He proposes that a second session should be established at some of the centrally located model schools for the benefit of those candidates who may for various causes have been unable to attend the first session. We have held in these columns that a considerable reduction in the number of county model schools would be a decided advantage, provided the same sum were still spent on the remainder. The country would get a better return for its outlay, by selecting, say, twenty-five of the best schools and making them still more efficient than they are. The last Report gave 882 as the total number of Student Teachers in attendance for 1882. This would give an average of, say, thirty-five to each model school. If the sessions were still further lengthened, and these schools kept in operation from September to January and February to June, their training power would be greatly increased. In the meantime, the establishment of an extra session at a few of the schools would be a step in the right direction. Examiners would then have less hesitation in rejecting immature candidates, the strong schools would become stronger still, and the standard of requirements might without any injustice be kept "firm with an upward tendency." We notice that out of 6,807 candidates in six years only 317 were rejected, that the number of model schools has decreased from 52 to 46, and that only about 30 of these have complied with the requirements of the Department. We are not in favor of any sudden changes, but the "natural" tendency is a healthy one, and the slight departure indicated would serve as a valuable experiment. No one will deny the immense service these institutions have rendered during their short career, and we have always rendered them full credit for what they have accomplished. But we are far from believing that they have advanced to their final stage of development and reached their maximum efficiency in the brief period of seven short years. We should be glad to hear from Inspectors and Model School Masters the conclusions at which they have arrived, and the suggestions they may be able to make for the further improvement of these institutions.

THE UNIVERSITY QUESTION.

The question of further aid to University College continues to receive active attention from leading minds on both sides of the controversy. But the UNIVERSITY OF ONTARIO does not seem likely to receive birth from the throes of the present discussion. The first plank of a union platform has not yet been even rough-hewed. The representatives of some of the denominal colleges express themselves as ready to give careful attention to any comprehensive scheme for university consolidation. But we have heard no such scheme propounded, and the sectarian college at Ottawa has maintained profound silence. We are unable to discern any indications of substantial agreement, and for the present we are reluctantly compelled to regard the consolidation of all the colleges under one university as merely a working theory, and outside the domain of present practical polities. The clash of interest and prejudice is still very great, and leaves little hope for an immediate solution to this important problem in higher education. The difficulties do not appear less on closer scrutiny as the discussion proceeds. It seems certain that for some years we must continue charitably to differ and leave the main question in abeyance. Perhaps the actual solution will be effected by men trained in our own secondary schools, less under the empire of foreign prejudices, less influenced by transatlantic ideals, and more united by thoroughly Canadian education and sentiment. Time must be allowed for so great a movement. If we have to wait another twenty-five years for the birth of a great university in this young country, we ought not to be impatient. It will probably live at least a thousand years; and we are already more mature in this respect than most of the states in the American Union who are our seniors by half a century.

Meantime it behooves the friends of higher education carefully to avoid the *role* of obstruction, and to view the question from the stand-point of national good. Higher education has only a few friends among the average citizens. A great majority look upon it as a luxury to be indulged in by the rich, and an actual necessity to the professional class only, a necessary preparation for bread-winning for which they should be willing to pay the full value. The average citizen measures utility by his own standard, which is usually the power of producing cash returns. If, therefore, internecine warfare breaks out between the colleges, the granger will hold the balance of power and the result will demonstrate the folly of parading our differences instead searching anxiously for points of agreement and standing in solid union for the common cause.

The higher education of the country must for some time proceed on the present lines, and we can only hope to pave the way to ultimate union. We are deeply impressed with the idea that reform and progress within Toronto University itself are essential factors of the desired result. She is not now what she was fifteen years ago. The development has been considerable and has strengthened her hold on the country. But bold steps must yet be taken if she is to attract the flower and blossom of our intellectual life to her bosom, and educate within her walls those who will otherwise seek over seas the advantages denied them in their native province. The experience of the United States in this respect is both instructive and warning.

Before the provincial university can properly consider itself the cope-stone of our national system, it must get itself as closely related to the high schools as the high schools are to the public schools of the country. It now holds practical con-

trol of the matriculation examination of every college in the province. But in that examination it has long refused to acknowledge Chemistry which is taught in every secondary school in the country. It has held itself aloof from the Education Department, and has refused to accept the educational tests of the Department *pro tanto*, though they have been as rigorous as its own, and have been taken at par elsewhere, both within and outside the province.

At the root of these and other ultra-conservative notions lies the constitution of the university senate. We mean no carping criticism, nor flippant fault-finding. We aim at the true interest of higher education. But we are compelled to say that if the high school masters had had four representatives on the senate during the last ten years instead of one, if the high school inspectors had also been on the senate during the same period, and if the powers of the Convocation of her twelve hundred graduates had been something more than the shadow of a shadow, we should to-day be much nearer the solution of present difficulties. Very little pains have been taken to place the university senate in vital connection with the national system of the province, hence the Education Department and the Senate have been frequently playing at cross-purposes. Upper Canada College has had more influence in the senate than the hundred high schools, while the Education Department has been practically unrepresented.

We need not further pursue the subject. An instalment of reform is necessary to popularize the senate, to bring the national university into perfect accord with the whole national system, and enlist the wealth and talents of all her sons in her loyal service. She has done a noble work for the province in setting up a high standard of attainment which has indirectly benefited every other institution of learning in the Dominion. Her mission still lies before her, and the pecuniary means for fulfilling it will certainly be forthcoming. If the present agitation does not lead to substantial improvements we shall almost lose confidence in the ministry of pain.

NOTES AND COMMENTS.

A Committee has issued a circular to Editors, County, and Township Municipal Officers, and all patriotic Ontario Canadians, especially the descendants of U. E. Loyalists in all parts of the country inviting their co-operation in promoting the Centennial Celebration of the First Settlement of Upper Canada by the U. E. Loyalists. It is proposed to combine this demonstration with the Semi-Centennial ceremonies of Toronto to be held in June next—Thursday the 19th of June is the day set apart for this purpose in the Celebration week. All interested should communicate at once with the secretaries—George T. Denison, C. E. Ryerson, D. B. Reed, and W. H. Withrow.

In confirmation of our view of the proper method of beginning the teaching of History in elementary classes as expressed in our last number we find an English Inspector of Schools, writing as follows :—

"If history must be taught to children, it would be more practical, if not more sensible, to begin with the reign of Queen Victoria, and go backwards, according to periods. About three-fourths of our children leave school under the impression that English history ceased either at the date of the battle of Hastings or at the end of the Wars of the Roses. The effort (to teach History on this plan) amounts to a *reductio ad absurdum*."

We find another of H. M. Inspectors, who has made a thorough study of Methods and is acknowledged as one of the highest authorities, putting himself on record in the following words :—

"He (the teacher) is by no means bound to follow blindly the course prescribed by the text-book. On the contrary it will be far better to fix upon the most characteristic periods, to cause them to be studied with fulness and exactness, and to reserve the chronicle of the less notable reigns until afterwards. For all the higher purposes contemplated in the study, a thorough acquaintance with the state of England in one or two of the most eventful periods is of far more value than a superficial knowledge of the entire history. The latter may be forgotten. There is no germinating power in it; it will neither grow when the pupil carries it with him into the world of books, and of news, and of conversation; nor furnish material for reflection in solitary hours. But the former serves as a nucleus for future acquirement. A learner who has been led to pay special attention to one period and to master all its *differentiæ*, carries away with him from school not only a fund of knowledge which will hold together and retain its place in the mind, but also right notions of what historical investigation really is, and of the manner in which the annals of a period should hereafter be studied. In short, ... a taste for historical reading, ... both the power and the disposition to study the subject systematically for himself. . . . is far more likely to be obtained by judiciously selecting and dwelling on the important epochs than by the ordinary routine method."

Down with the ancient Britons, away with genealogies and lists of sovereigns, bury the skeleton theory, the bird's-eye view hypothesis, and the great land-mark doctrine in one grave. Let us begin to teach history by teaching *history*. We ask those who do not see the matter in this light to solve the conundrums—Why did the University and the Education Department abandon the bird's-eye plan of teaching English Literature? Why would it be impossible now to persuade them to go back to the good old plan?

We take the following from an exchange :—

"A school teacher at Irkulsh, named Neoustroieff, was recently thrown into prison for alleged manifestations of sympathy with political exiles, and for disseminating political ideas among his pupils. The prison was visited by General Anoutchine, Governor-general of Eastern Siberia, who had Neoustroieff brought before him and upbraided for his imprudent conduct in very forcible language. Neoustroieff, enraged at this, struck the Governor in the face, before he could be prevented by the warders. The Governor-general had the man tried and shot within twenty-four hours. Certainly, we cannot regard Russia as an educational paradise, if this is a fair specimen of the way in which teachers are treated."

What would the Russians do with Ontario teachers who often take the stump during election contests? Imagination folds her wearied pinions without reaching the conception.

An assistant master in London has discovered a new way of using the strap. He was summoned before the Thames Police

Court for having punished a boy much given to talking, by fastening a strap round his tongue and tying it by a string to a chair. The magistrate decided that no defence was necessary. The master had merely wished to degrade his pupil—the same as by putting a fool's cap on a boy's head, or tying the arms of a boy given to fighting. The case was dismissed, but the teacher was not allowed costs, whereupon a leading educational paper takes the magistrate severely to task, and seems to think the teacher received scant justice. The incident affords a curious little glimpse at the low state of English opinion and practice in the matter of discipline. If an Ontario teacher were to follow this precedent he would find himself more famous than he desired, and would probably be heavily fined and perhaps dismissed from the profession.

The following story from the *Illinois School Journal* shows how a little good humoured tact enables a teacher not only to overcome difficulties but to make people laugh with him and enter into sympathy with his work. We have room for about 7,000 such teachers in Ontario, and as many more in the other provinces :—

"A certain teacher, who is well known in at least one county in the State, was troubled by the over-crowded condition of his school-room. Appeals for additional seats were disregarded by his directors. He at last determined to accomplish by indirect what he had been unable to effect by ordinary means, so one day, when all the available seating facilities were in use, and a boy was ensconsed in the teacher's chair and a few more on the floor, he sent for his Board. Mr. A. came in and was warmly received by the teacher. He looked about somewhat hesitatingly and said, 'Well, Mr. A., I should be glad to give you a chair, if I had one, but I am just out. Make yourself at home; sit down on the stove." Mr. A. to the amusement of the pupils, awkwardly bestrode the "warmer," which the favorable weather had not yet brought into active operations. Shortly after, director number two appeared. He was received with equal cordiality by the teacher, and, from necessity, took his position with number one. Number three put in an appearance a little later, and was offered a place by the side of his official colleagues. But about that time it began to dawn upon the minds of the triumvirate that the teacher was less innocent than his "childlike and blank" countenance indicated. The president called him one side with, "Mr. R, I am a little busy, and will call again. How many do you need?" It is needless to say that an adequate supply of desks, with all the modern improvements, were on hand in the shortest possible time."

The Southern Illinois State Normal University was destroyed by fire in December last. While the flames were yet roaring and surging, a call was issued for a mass meeting of the people of Carbondale. Steps were taken the same evening to repair the damage, and $3,000 subscribed on the spot to erect a temporary building until the former beautiful edifice can be restored. Dr. Allyn, President, announced :—"School will be called at the usual hour to-morrow morning at the M. E. Church. The University will not lose a single day!" That is characteristic western pluck and energy. The library of 8,000 volumes was saved by the coolness and determination of one of the professors.

At the Annual Convention of Protestant Teachers in Quebec held at Lachute, Oct. 25th, Principal McCabe of the Ottawa Normal school, delivered a lecture on *English Grammar Teaching*. In the course of an address to the Convention, he considered the question that faced every teacher when he took a new pupil, namely, "What shall I do for him?" :—

"First then, the teacher has to give him his outfit for the work of life. Secondly, he must teach what he has to teach so as to train the pupil's mind. There is no finality in education, and the true test of an education is the development of the pupil after he leaves school. All a teacher has to do is to impart to his pupils a desire for knowledge. The teacher has minds to deal with, and he must understand fully what the mind is. The mind develops slowly, and a teacher makes a mistake if he appeals to mental powers not yet fully awakened. No opportunity should be omitted of awakening in young pupils the observing powers, by means of drawing, object lessons, and music. If this part is well done, the hardest part of the work is accomplished. It is from this point of view that it is necessary to be careful about the use of text-books which cramp the powers of observation while appealing to the memory.

In an article in the *Educational Record* Mr. Rexford recommends the following books for teachers which may serve to supplement the list we recently gave in these columns :—

"Skeat's *Etymological Dictionary*, Morrison's *School Management*, Emberson's *Art of Teaching*, Hughes *Mistakes in Teaching*, Parker's *Talks on Teaching*, *Methods of Teaching Geography*, by Lucretia Crocker (30 cts.), *Graded Instruction in English for the use of Teachers*, by Mr. O. T. Bright, Chicago, *Elementary Lessons in English*, Gage & Co., edited by Principal McCabe, *Primer of Politeness*, by Alex. M. Gow, Drysdale & Co., Montreal."

The young teacher who means to master his profession, must have such books even if minor luxuries have to be dispensed with.

It seems probable that the Nova Scotia Legislature at its approaching session will take steps, in accordance with the urgent representations of the Superintendent of Education, Dr. Allison, to put the matter of intermediate education on a better footing. Nova Scotia has good elementary schools, and a very superior Normal School; but she needs for the symmetrical completeness of her educational system a series of well equipped and efficiently sustained High Schools. Of such at present she has but a limited number.

The wave of agitation respecting classical studies started by Mr. Charles Francis Adam's noted address has not yet entirely subsided in the United States. To say nothing of Lord Coleridge's emphatic utterances at Yale, the soundness of Mr. Adams's destructive criticism has been called in question by Dr. Porter, President of Yale College, Dr. Peabody, of Harvard, and Dr. Seelye, of Amherst. Mr. Adams, however, can console himself with the fact that a large part of the daily press has expressed substantial concurrence with his views. The discussion is pretty sure to lead to advantageous modifications of prevalent methods of teaching classics.

Mr. Mundella, the English Minister of Education, distributed the prizes at St. Katherine's College, Tottenham, Dec. 7th.

The following extract from a report of his address shows the intelligence and sympathy which he throws into the great work he is carrying out :—

"After dealing with the danger of overwork to the female pupil-teachers in schools, he spoke of his efforts to protect them by the introduction of the twenty-five hours per week rule. He next spoke of the advantages those enjoyed whose circumstances enable them to obtain the two years' training given in such colleges as this. There are now about 60,000 young teachers growing up in the country, and to provide training colleges for all would be to incur an enormous expense; while to insist upon all going through this course of training would be to place a serious hindrance on the learning power of many whose parents were not in a position to bear the charge of providing for their support. Addressing the young teachers before him, and those more particularly about to enter upon life as schoolmistresses, he warned them against the danger of unduly stinting their diet and of overworking themselves, insisting upon the importance of health as an element of success in teaching, while at the same time he begged them to continue their studies after leaving college, because, as Professor Huxley had recently said at Liverpool, those who were to impart elementary information must themselves be saturated with and soaked in knowledge of the subject they had to teach. He would, too, beg them to be thrifty. There were some 20,000 or 30,000 women engaged in teaching in the public schools in France, and she must be a woman of high attainments among them who could earn the salary of £80 a year, with which the young teachers leaving this college would, as they had just heard, begin life. He understood that the French schoolmistresses were as civil servants entitled to pensions, and that to meet the charge of the pension a deduction of 5 per cent. was made from their salaries. He would strongly recommend his young hearers to make it an inviolable rule to lay by against a rainy day something more than 5 per cent, of their earnings. Commenting on provisions of the Code, he reminded them that they were not, as in France, the slaves of any minister, nor were they compelled to take up in their schools every subject prescribed in the Code. On the contrary, great freedom was allowed them, and the Minister of Education in this country was advised by a number of considerate and sympathetic men who knew the work both teachers and pupils could do, and who would take care that too much was not required from them. If the Department should err in any direction, they were not too proud to retrace their steps. They had the courage to take the line they believed most in the interest of education and of the children. The schools, it must not be forgotten, were not made for the teachers; on the contrary, teachers, inspectors, and Ministers of Education were appointed for the benefit of the scholars, and the first consideration must be the good of the children. But, having done the best that could be done for the children, the Committee of Council on Education would do the best they could adequately to reward and to show due consideration for the teachers. He believed the public of this country was never before so disposed to promote education. Every year he had to make increased demands upon the Treasury on this account, and the money thus expended was the best spent money the Government laid out. With respect to the duties they were about to undertake, he wished to remark that there was scarcely a Board school in this country in which they would not be required to give religious instruction. They might exercise a potent influence with regard to one of the greatest social problems of the day. The outcasts, not only of London, but of Great Britain, would come under their direct control, and it would depend very much upon the influence exercised by the teachers of the country whether we should have outcasts in the next generation or not. Without setting up educational culture as a specific for all the evils of life, he agreed with a great thinker who had written on the subject that the first great attempt to reach the profound misery of our great cities, and especially of London, was to get all the children into schools. It was the first attempt to bring civilisation to the outcasts, and to place them in contact with Christian men and women."

Mr. Mundella's speech was listened to with great interest by a large assemblage of visitors, and many of the points were received by the students with the greatest enthusiasm."

Mathematical Department.

SCIENCE AND ART DEPARTMENT, ENGLAND.

Examiners.—Rev. J. F. Twisden, M.A., and A. R. Willis, Esq., M.A., B.Sc

First Stage.

(Three Hours are allowed for this Paper.)

Section A.—ARITHMETIC.

1. What is a decimal fraction? What is a recurring decimal? Express $\frac{10}{37}$ as a recurring decimal, and 0·0173535... as a vulgar fraction.

2. Show that the square root of 0·37 exceeds the cube root of 0·217 by a difference which very nearly equals $\frac{1}{150}$.

3. A publisher sells books to a retail dealer at 5*s.* a copy, but allows 25 copies to count as 24; if the retailer sells each of the 25 copies for 6*s.* 9*d.*, what profit per cent. does he make?

4. In building a wall, 22,500 bricks are used at £1 12*s.* a thousand, 135 bushels of lime at 1*s.* 4½*d.* a bushel, 16½ loads of sand at 3*s.* 6*d.* a load; the labor is reckoned at 9*s.* 6*d.* per thousand bricks laid; and 300 coping stones are used at 1*s.* 7½*d.* apiece, including cost of laying. Make out the above in the form of a bill, and find the amount after deducting 7½ per cent. for prompt payment.

5. The capital of a trading company consists of 4,000 *A* shares of £80 each and 1,000 *B* shares of £25 each; in dividing the profits 5 per cent. of the amount of each share is first paid, and then the remainder, if any, is divided equally amongst the shareholders. The profits of the undertaking in one year were £34,853 12*s.* 6½*d.*; how much would be paid to the holder of an *A* share, and how much to the holder of a *B* share?

6. An imperial gallon is 277·274 cubic inches; a Winchester bushel 2150·42 cubic inches. How many Winchester bushels are equal to 100 imperial bushels?

Section B.—GEOMETRY.

7. Draw a straight line perpendicular to a given straight line of an unlimited length, from a given point without it.

Let AB be drawn at right angles to CD and meet it in B, join AC, CD; if BC is greater than BD, show that AC is greater than AD.

8. In any triangle (ABC) show that, if the angle A is greater than the angle B, the side BC will be greater than the side CA.

Let ABC be an equilateral triangle, and let a point Q be taken in BC produced (in the direction B to C); show that Q is nearer to A than it is to B.

9. If a straight line falling on two other straight lines makes the interior angles on the same side together equal to two right angles, the two straight lines are parallel to each other.

If A, B, C, D are the angular points of a quadrilateral taken in order, and, if the angles at A and B are together equal to those at C and D, show that two sides of the quadrilateral are parallel to each other.

10. Equal triangles on the same base and on the same side of it are between the same parallels.

If a quadrilateral is divided into four equal triangles by its diagonals, show that it is a parallelogram.

11. Draw a triangle ABC, and through A draw a line parallel to BC; show how to draw through B a line cutting AC in P, and the above-mentioned parallel in Q, so that BP shall be one-third of PQ.

12. If one diagonal (AC) of a quadrilateral bisects the other diagonal (BD), show that AC also bisects the quadrilateral itself.

SECTION C.—ALGEBRA.

13. Explain why the product is a^{12} when a^5 is multiplied by a^7, and why the quotient is a^5 when a^8 is divided by a^3.

14. Obtain $(x^3+3x+15)^2-(x^3-3x+15)^2$ in its simplest form, and find its value when $2x=-5$.

15. Simplify the expressions :—

(a) $\dfrac{x-a}{\frac{1}{a}-\frac{1}{b}} \times \dfrac{a-b}{1-\frac{a}{x}}$

(b) $\left(\frac{1}{2}+\frac{1}{3x}\right) \div \left(9x-\frac{4}{x}\right)$.

16. Find the greatest common measure of $x^4-5x^3-6x^2+36x-7$ and $3x^3-13x^2+43x-8$, and write down these expressions in factors.

17. Solve the equations :—

(a) $x-\dfrac{2x-0{\cdot}3}{0{\cdot}7}=\dfrac{5-x}{0{\cdot}35}$.

(b) $\dfrac{3y}{4}-\dfrac{2x}{5}=\dfrac{13}{5}$, $\dfrac{x}{4}+\dfrac{y}{5}=\dfrac{19}{12}$.

18. A sum of £23 14s. is to be divided between A, B, and C; if B gets 20 per cent. more than A and 25 per cent. more than C, how much does each get?

SECOND STAGE.

(Three Hours are allowed for this Paper.)

SECTION A.—ARITHMETIC AND ALGEBRA.

21. Find the value of

$$\left(x+\frac{a}{b}\right)\left(x+\frac{b}{a}\right)-\left(x-\frac{a}{b}\right)\left(x-\frac{b}{a}\right)$$

when $x=\dfrac{1}{a^2+b^2}$.

22. Reduce the following expression to its simplest form :—

$$\left(\frac{a-b}{a+b}\right)-\left(\frac{a}{a-b}+\frac{b}{b-a}\right)^2$$

and find its value expressed as a decimal when

$$a=2 \text{ and } b=\sqrt{5}=2{\cdot}23607.$$

23. Find all the values of x or of x and y which satisfy the following equations :—

(a) $\dfrac{9}{x}+\dfrac{25x}{x-1}+9=9$.

(b) $(x^2-4x+3)^2-8(x^2-4x+3)+0$.

(c) $4(x^2-y^2)=35$, $x-2y=2$.

24. The first of two pictures is 1 ft. 6 in. by 2 ft., the second 2 ft by 2 ft. 6 in.; they are to be framed in the same way; if the glass and frame of the former cost 7*s.* 6*d.* and that of the latter 11*s.* 2*d.*, what is the price of the glass per square foot, and of the frame per foot of length?

25. Find the first five terms of the square root of $1+x$, and by means of them show that $\sqrt{(101)}=10{\cdot}0498756$.

26. A racecourse is 3,000 ft. long; A gives B a start of 50 ft. (so that B has to run 2,950 ft.), and loses the race by a certain number of seconds; if the course had been 6,000 ft. long, and they had both kept up the same speed as in the actual race, A would have won by the same number of seconds. Compare A's speed with B's.

SECTION B.—GEOMETRY.

27. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part produced, together with the square on half the line bisected, is equal to the square on the straight line made up of the half and the part produced.

In the triangle ABC let AB equal AC, produce BC to D, join AD; show that the square on AD exceeds the square on AB by the rectangle BD, DC.

28. If an angle at the centre of a circle, and another at the circumference stand on the same part of the circumference, show that the former angle is double the latter. Only one case need be proved.

Draw a straight line which shall divide a given circle into two segments, such that the angle in the one shall be three times the angle in the other.

29. Show that the angle in a semicircle is a right angle.

If the diagonals of a quadrilateral are equal, and bisect each other, show that the quadrilateral is a rectangle.

30. Construct a square equal to one-third of a given square.

31. Describe three circles of given radii such that two such shall touch each other externally and the third internally. What relation must exist between the radii if the construction is to be possible?

32. Let PA and PD be two lines of given length inclined at any angle; in PA take any point B; find a point C in PD (or PD produced) such that the rectangle AP, PB shall equal the rectangle CP, PD. How could you tell by merely considering the angles PAD and PDB, whether C falls in PD, at D, or in PD produced?

THIRD STAGE.

SECTION A.—MISCELLANEOUS.

41. Find all the values of x and y that satisfy the equations

$$\frac{x-y+1}{x+y+2}+\frac{x-y+1}{x+y}=4.$$

$$9+\frac{16}{x-y+1}+\frac{4}{a+y}=0.$$

42. Show how to find the number of homogeneous products of r dimensions, which can be formed of powers of n letters a, b, c, ...

How many sets of positive integral values of u, x, y, and z, satisfy the equation

$$u+x+y+z=12.$$

N.B.—Zero (0) is to be reckoned a positive integral value of u, x, y, or z.

43. If a and b are any two numbers, and A, G, H three other numbers, such that a, b, A are in arithmetical progression, a, b, G in geometrical progression, and a, b, H in harmonical progression, show that

$$4H(A-G)(G-H)=G(A-H)^2.$$

44. If two parallelograms have a common diagonal, show that the straight lines joining the angular points on one side of the diagonal is parallel to the straight line joining the angular points on the other side of the diagonal.

45. Let two circles touch internally at A, and let the radius of the one be equal to the diameter of the other circle; draw AB the diameter of the larger circle passing through A, and BP to touch the smaller circle in P; join AP; show that the square on BP is three times the square on AP.

46. Show how to construct a rhombus, having given its angles, and the radius of its inscribed circle.

HONORS EXAMINATION.

You may not answer more than ten questions.
The value attached to each question is 50.
Three hours are allowed for this paper.

61. If x', x'', y', y'' are the values of x and y, which satisfy the equations

$$ax+by+c=0.$$
$$lx^2+my^2+n=0.$$

Show that $a^2(m+n)+b^2(n+l)+c^2(l+m)=0$ provided

$$x'x''+y'y''+1=0.$$

62. There are n things, p of one sort, q of another sort, r of a third sort, and so on; find the number of combinations that can be formed of them, taken m at a time.

Two counters are marked A, three B, five C, and two D; how many different combinations can be formed of the counters taken five at a time.

63. When m and n are small compared with x show that—

$$\log(x-m)-\log x=\frac{m}{n}\left(1+\frac{n-m}{2x}\right)(\log(x+n)-\log x) \text{ approxi'ly.}$$

Given $\log 1{\cdot}01=0{\cdot}0043214$, calculate $\log 1{\cdot}0075$.

64. Sum the following series :—

(a) $\dfrac{1}{p(p+1)}+\dfrac{1}{(p+1)(p+2)}+\dfrac{1}{(p+2)(p+3)}+\ldots$ ad. inf.

(b) $3\times5+5\times7+7\times9+\ldots+(2n+1)(2n+3)$.

(c) $3m+5(m-1)+7(m-2)+\ldots+(3+2(m-1))1$.

65. $ABCD$ is a quadrilateral, having the sides AB and DC parallel to each other, and together equal to the side BC; show that the straight lines, which bisect the angles B and C, intersect in AD.

66. Given two opposite sides of a quadrilateral capable of being inscribed in a given circle, and the sum of the other two sides; describe the quadrilateral. To what extent is the solution ambiguous?

67. Take a point P outside a given circle whose centre is C; a circle is drawn through P cutting PC at an angle α, and touching the given circle externally; show that its diameter equals

$$(2rh+h^2)\div\{r+(r+h)\cos(90\pm\alpha)\}.$$

when r denotes the radius of the given circle, and $r+h$ the line CP. Find under what circumstances the contact may be internal, and the value of the diameter in that case.

68. Show how to construct a triangle, having given the base, the vertical angle, and the length of the line drawn from the vertex to the base, and bisecting the vertical angle.

69. Find a formula for all the angles which have a given sine.

If $\cos\theta=\frac{1}{2}$, it follows, of course, that $\sin\frac{\theta}{2}=\pm\frac{1}{2}$; show that the series of values of θ derived from the first equation is the same as that derived from the second equation.

70. Find the values of θ which satisfy the equation

$$2\tan\theta+\frac{1}{\tan\theta+}\ \frac{1}{4\tan\theta+}\ \frac{1}{\tan\theta+}\ \frac{1}{4\tan\theta+}\ \ldots=2\sqrt{3}\cos 2\theta.$$

71. If two triangles ABC, $AB'C'$ have a common angle A, and the same described circle within the angle A, show that

$$\frac{r_1}{r}=\frac{\tan\frac{B}{2}\tan\frac{C}{2}}{\tan\frac{B'}{2}\tan\frac{C'}{2}}$$

where r and r_1 are the radii of the circles inscribed in the triangles ABC and $AB'C'$.

72. If α and β are the roots of the equation $x^2-x+\sqrt{(3)}-1=0$, show that $\tan^{-1}(\alpha^2)\times\tan^{-1}(\beta^2)=n\pi+\frac{3\pi}{4}$.

73. Show how to expand $\sin\theta$ in ascending powers of θ. Show that for angles less than 26′ 30″, $\sin\theta\div\theta$ differs from unity by less than the one hundred-thousandth part of unity.

74. Establish the formula $\cot a\sin b\cot A\sin C+\cos b\cos C$.

Find what property of a plane triangle can be deduced from this formula by supposing the radius of the sphere on which the triangle is described to become indefinitely larger than the sides.

75. Show how to determine the relative positions on the surface of a sphere of the four angular points of a regular tetrahedron inscribed in the sphere.

If B, C are two of the angular points, compare the length of the arc of the great circle joining them, with the length of the arc BC of the small circle, in which the plane of one of the faces containing BC cuts the sphere.

76. If A is an angle and a a side of a regular spherical quadrilateral show that $\cos A+\tan^2\frac{a}{2}=0$.

If each side of the quadrilateral is an arc of 60°, show that its area is very nearly $\frac{4}{3}\frac{1}{7}ths$ of the surface of the sphere.

Correspondence.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—In reply to the question concerning whispering, asked by "Lennox Teacher" in the December number of the SCHOOL JOURNAL, I would offer the following:—

First, I think that pupils who sit together and who are at the same work, ought to be allowed to compare notes occasionally. Of course if the two are so unequal in attainments that the one continually interrupts the other's work in order to have this or that done for him, the effect is injurious; but if the whole class are prepared (as they should be) for the work assigned, I see no objection to allowing pupils at the same desk to work together. On the contrary, I think it would be an advantage; for each would stimulate the other to greater industry and interest in the work, while the contact of one mind with the other would quicken the perception of both by awakening them to increased activity. Besides, it would be almost too much to expect of a pupil who has just mastered, say a difficult problem in Arithmetic, to refrain from giving vent to his pleasure by communicating the fact to his seat-mate.

In the second place, while I do not object to communications to a limited extent between those at the same desk, I would allow no whispering from one desk to another without permission from the teacher. This rule is necessary to prevent disorder.

To check conversation between pupils on subjects aside from their studies it is necessary to supply them with plenty of work, and to get them thoroughly interested in it. It would be wise, also, for the teacher to keep a sharp lookout against general conversation among the less studious pupils, treating every such case as a breach of order.

The teacher who follows this plan must not, of course, look for perfection of order all at once. It takes time to arouse the pupils to such an interest in their work that they will be always busy; and even then, pupils so busy and so interested will, occasionally, for want of thought, interfere with the schoolroom work by making unnecessary noise. But by patient, persevering effort on the teacher's part, this tendency may be almost entirely overcome. On the whole, the adoption of such a plan will more than repay the teacher in the amount of work done, for whatever sacrifice of perfect quietness it may involve.

I am, yours truly,

BRANT TEACHER.

January 2nd, 1884.

THE RECENT EXAMINATIONS AND THE STUDY OF HISTORY.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—I would like to call attention, through the medium of your Journal, to a feeling of dissatisfaction which exists among the teachers and students of Ontario, with regard to the style of questions set for the history examination.

It has always been the custom of the examiner—and we find the same fault in our authorized text books—to deal too largely in dry facts. Like *Mr. Gradgrind* they seem to think that education consists in well storing the mind with facts; in other words, to make it a species of lumber room, which it is the teacher's duty to fill during the year and the pupil's to empty at the annual examinations. The majority of teachers throughout the province clearly understand, that the practice of paying too much attention to individual events, and neglecting to inquire into causes, and the social results that spring therefrom, is totally at variance with all philosophical teaching, yet they are compelled to follow the system in order to pass their pupils through the examinations set for them.

The study of history should be a study of national life, and not a biography of kings, not a record of isolated events; yet, year after year, we see the students closely questioned on the earlier centuries, while those great social struggles, which took place but a short time ago, and whose effects are yet visible, are comparatively neglected.

An object to be constantly kept in view by the instructor, is the development of the reflective faculties of his pupils; and there is no subject which affords a better training for these mental powers than history, if judiciously handled. It should be remembered that those faces, which appear every day in the school-room, belong to those who may eventually fill our legislative halls; and they will be men who will need to profit by the experience of their predecessors, and should have an intelligent knowledge of history.

With a change in the style of questions will come a change in the methods of teaching; and the first necessity will be a suitable text book; for not one of the volumes now authorized is fit for common school or intermediate work.

There is yet another point worthy of notice, and that is the prominence given to English and Roman history as compared with our own. There is now being developed throughout the Dominion a national spirit which it is the teacher's duty to foster; and yet we find that in the examinations for common school teachers, Roman history is placed on a par with that of Canada. It is only during the last couple of years that Canadian History has been allowed even that position. In the past students expected only a question or two at the close of the paper and very often never pretended to read the subject. Should this be? Should the history of an empire which passed out of existence fourteen hundred years ago be placed upon an equal footing with that of our own living, flourishing Dominion.

Hoping that I have not trespassed too largely upon your space, I have the honor to be, Sir,

Yours obediently,

T. H. M.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—I had given up all hopes of a reply to those remarks of mine, which appeared in your Journal, last summer, concerning Mr. W. M. Leigh's article on the Subjunctive Mood. I was glad to see Mr. Leigh's reply, even after the lapse of so long a time, and to know that he had the magnanimity not to treat my enquiry with "silent contempt." I will have the further condescension to throw some more light upon the mysterious resemblance between his article and that of Mr. Stewart's. Since Mr. Leigh repudiates the charge of plagiarism (with which I did not charge him) I am yet at a loss to account for the sameness of thought and expression of the two articles in question. I said before, and I say so again, that the whole handling of the subject is the same in both, and in several cases the ideas are expressed in the same language. As I have both articles in my possession, I will give a few quotations for the benefit of those interested, to compare. Mr. Stewart, near the beginning of his article, says:—"The real source of difficulty is that, in former treatises on English Grammar, we were taught to determine moods mechanically. Hence, when an author who desires us 'to emancipate ourselves from the tyranny of names' gives a logical presentation of previously unobservable peculiarities in the conjugation of verbs, teachers whose possession of more than ordinary intelligence and no mean literary culture cannot be disputed, but whose minds have been vitiated by the unphilosophical teachings of grammarians of the old school, if I may so speak, at first fail to perceive many nice and valuable distinctions in thought, to express which our noble tongue is so admirably fitted."

Mr. Leigh says:—"The real source of difficulty with which I had to contend, and with which those who have experienced the difficulty also had to struggle, was the way in which we were taught to distinguish moods. The method was purely mechanical. Now, when Mason wishes us to free ourselves from a tyranny of names, and presents peculiarities, hitherto unnoticed, in a logical manner, we, as teachers who possess more than ordinary intelligence and literary culture, but whose minds have become vitiated by the teachings we received from the older grammars and *older* teachers, at first do not perceive the distinctions in thought, to express which the English language is so admirably fitted."

In another place Mr. Stewart says:—"The question was not, what does language, what does use, 'national, modern and reputable,' as laid down by the illustrious Campbell, 'teach'? The great question in grammatical enquiry was 'what does the authorized text book teach'? The doom of this vicious system, fortunately for the English studies of our youth, has been sealed. A spirit of true philosophical research has been extended to all departments of English grammar which may, and not with irony, innocently severe, as in former works, be defined to be 'a science and an art.'"

Mr. Leigh says:—"The question was not: What does language teach? What does use teach? But the great question in grammatical enquiry was, What does the authorized text-book teach? The doom of this system has, fortunately for the studies of our youth, been sealed. Research to all the departments of English grammar, has been extended, and it may now with truth, and not with irony, be called a science and an art."

Again, Mr. Stewart says:—"With the desire to be practical, I have simply attempted to indicate, in terms as plain as possible, the plan that I have found to be most successful in getting students to master this difficulty. When the use of the present indicative in hypothetical clauses is thoroughly understood, little difficulty will be experienced where to use the present subjunctive."

Mr. Leigh says:—"With the desire to be practical, I have simply attempted to indicate, in terms as plain as possible, the plan with which I have been most successful in getting my pupils to master the Subjunctive mood. When the use of the present indicative in hypothetical clauses in fully understood, little difficulty will be experienced in determining when to use the present subjunctive."

If that is not similarity of thought and expression, I should like to know what is. A preacher in Chicago was accused of preaching another man's sermon. In reply to the charge, he said that he had admired the sermon so much, and studied it so deeply, that he had become *saturated* with it, and delivered it unconsciously. Whether Mr. Leigh has become "saturated" with Mr. Stewart's article or not, "we, as teachers (of West Huron) who possess more than ordinary intelligence and a little literary culture," should like to know. I bear no ill-will to Mr. Leigh, and have no wish to persecute him. All I want is the truth, and if, when told, it should not redound to his credit, I should be one of the first to say "go, and sin no more." I only ask a satisfactory explanation, and teachers and conventions would be lax in their duty, did they not insist upon having one in such cases.

I do not think it necessary to give my name. I will just say that I am one of those whom Mr. Leigh compliments so highly in regard to literary culture, etc., and will sign myself as before,

ENQUIRER.

West Huron, Jan. 5th, 1884.

[We have compared the two articles referred to—see CANADA SCHOOL JOURNAL for September 1879 and for May 1883. The exact coincidence of both thought and phraseology is easily observable from paragraph to paragraph. Both essays, however, profess to be drawn from the same sources. Perhaps it would be well for the writer to "give a full account of the whole matter."—ED.]

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—Do you not think that a second session should be established in some central model school for the benefit of those who could not attend the first session? Many "appeals" are sustained each year, and it is often so late before a decision is arrived at that the candidates cannot attend an M. S. for that year. Some candidates through sickness cannot attend, and others who fail at the first session think it a hardship to be compelled to wait a year before they can attend again. Now, if the government would make a grant to some central school to enable the Board to meet the extra outlay, I think it would be money

well spent. Stratford Model School has all the necessary equipments for a second session. Can you help it on in the JOURNAL?

Yours very sincerely,

C. M. CHADWICK.

M. STANLEY, PETERBORO, asks: 1. What Poets you class among the Subjective? 2. The meaning of word as applied to Poets? 3. What treatise contains a full account of different "Schools of Poets"?

He will find satisfactory answers in Collier's *English Literature* pp. 361, 352; Angus's *Handbook of English Literature*, pp. 99—107. Shaw's *Manual of English Literature* is the best general text-book for students.

D. H. BURBIDGE, Halifax, asks for information about the Teachers' Superannuation Fund in Ontario. He wishes to see the substance of Mr. Jenkins' paper at the North Huron Teachers' Association, as well as selections from other papers read at Ontario Associations, "especially those on History, and Mr. Harstone's on 'Euclid to Beginners.'" He continues:—I feel almost envious of the spirit and advantages which your teachers seem to enjoy. In this province, associations of teachers seem to be at a discount. True, we have the provincial and a few county associations once a year, but in this city where there are over 100 teachers, there is neither an institution nor an association, and that *esprit de corps*, so necessary in any professional calling, is truly an unknown quantity.

I must not forget to mention that I am well pleased with the JOURNAL, and I wish it were a little more Nova Scotian. Being printed so far from us, it does not seem to belong to us. This is the only complaint I have heard, "too much Ontario," but I am of the opinion, that those who complain, do not read very much educational literature.

As a teacher, I thank you for your invitation to send along "items." I have often been tempted to write to you, but feeling that perhaps you had your "specials" by the seaside, I did not like to interfere. Were my letter not already too long, I would answer "Lennox Teacher's" questions (*vide* Dec. No., '83, page 253) but I think he will find it answered in Dec. No. page 259, under the heading "Extremes in School Management."

GRAMMATICAL CRITICISMS.

DEAR SIR,—Do you consider these two extracts specimens of slipshod English, and are my corrections any improvement on them?—

1. "The possibilities of revolution—any change occurring in this country depends on two circumstances: the collapse of our trade, and a consequent condition of general famine and high prices of food, and the breaking up of our parliamentary system." *Marquis of Blandford in Fortnightly Review for July, 1883*, page 26 S.S. *Lib. Ed.*

In the first clause of this sentence the writer states that the possibilities of revolutionary change depend on *two* circumstances, and in the second clause he goes on to specify these two depending circumstances. When reading the latter clause, however, the reader's attention is arrested by *three* circumstances which the writer really specifies; and it is only after that he has stopped to weigh the meaning of the writer, the reader perceives that the two first circumstances specified in the second clause, viz., *collapse of trade*, and *general famine and high prices*, co-existing in the relationship of cause and effect, constituted the first circumstance referred to in the first clause, while the breaking-up of our parliamentary system" was the second. If this was the purpose of the writer, of which there can be no doubt, in order to avoid any ambiguity of expression, or to prevent hesitancy on the part of the reader, it would have been better to have modified the last clause of the sentence in some way similar to the following; viz., "the collapse of our trade resulting in a condition of general famine and high prices of food, and the breaking up of our parliamentary system," or "a condition of general famine and high prices of food consequent on a general collapse of trade, and the breaking up of our parliamentary system."

2. "In the German army the system of food supply is excellent, and though in France the number of men to be supplied numbered about fifty times as many as the British forces in the Crimea, yet no hitch occured and no undue strain or anxiety was thrown upon general officers." *Nineteenth Century for August, '83, page 9.* What is meant by the words "and though in France the number of men to be supplied" in the sentence is not very clear. Whether it was the number of men in the German army, or the number of Frenchmen in France, to be supplied with food, that was about fifty times as great as the number of the British forces in the Crimea, the reader is not especially told; but most probably the following is what was intended by the writer: "In the German army the system of food supply is excellent. Though in numbers the German forces which had to be supplied when in France were about fifty times as great as the British forces in the Crimea, yet no hitch occurred nor were the general officers subjected to any undue strain or anxiety."

W. N. WATSON.

Special Articles.

NOTES OF TALKS ON TEACHING.*

TALK II.—READING.

In the teaching of any subject it is of great importance that we have a clear definition of what we teach. Not a definition in words alone, but a definition in thought that comprehends what we teach in the most definite manner. The question before us is, What is reading? The answer to this question that I shall give is, Reading is getting thought by means of written or printed words arranged in sentences. Thought may be defined as ideas in relation. Ideas are either sense products, or derivations from sense products. We get thought, first, by seeing objects in their relations; second, by thinking of things in their relations without their presence; third, by seeing pictures or drawings of objects in their relations; and fourth, by language. We get thought by language in two ways. First, by the spoken language, and, second, by the written or printed language. To illustrate, I put this hat upon the table. Here you see the relation of two objects, and you think *The hat is on the table.* I draw or sketch the hat on the table, and it brings to your mind the thought *The hat is on the table.* I say, "The hat is on the table," and you think the same. I write on the board the sentence, *The hat is on the table*, and that conveys to your mind the same ideas in their relations. Thus we get the same thought in four ways; the only difference in the result is, that the thought gained from seeing objects in their relations is generally clearer.

Hearing language is getting thought by means of spoken words arranged in sentences. Reading, as I have said, is getting thought by means of written or printed words arranged in sentences. It would be well for us to examine these two operations, hearing

* Notes of Talks on Teaching, given by Francis W. Parker, at the Martha's Vineyard Summer Institute, July 17 to August 10, 1882.

language, and reading, in order to see in what they are alike, and in what they differ. The arrangement of words in sentences, that is the idioms, are precisely alike. The thought in the mind, gained either from hearing language or reading, is identical. The only difference lies, then in the fact, that in one case the word is spoken, and in the other it is written or printed. I am sure you have said, as I have given my definition, that reading is the oral expression of thought. That is oral reading. But you will see at once that we may get thought—and by far the greater part of reading is confined to this process—and not give it to others by means of the voice. If we comprehend oral reading in our definition, we should say that reading is the getting and giving of thought by means of words arranged in sentences.

Not less in importance to the definition of reading, is the thorough knowledge of the preparation a child has made for learning to read, how he has made it, and exactly what is to be done in learning to read. This may be briefly stated thus : First, a child has acquired ideas from the external world by means of his senses. Second, he knows the ideas in their relations, that is, he has thoughts. Third, the child has associated spoken words with these ideas. Fourth, he has associated idioms or forms of sentences with his thoughts. Fifth, he has learned to utter these words and idioms in order to express his thoughts. This is a brief summary of the process of learning to talk. How he has done this will be discussed in another place. Exactly what the child has to do in order to learn to read may be clearly stated thus : The ideas that he has associated with spoken words are to be associated with written or printed words. If I am not mistaken, this is the sum and substance of learning to read.

Oral reading may be further defined as the vocal expression of thought that is gained by written or printed words. A child has already learned to express thought orally, by means of five or six years' continual practice. The emphasis, inflection, and melody of most children's voices can rarely be improved. The child should be trained in no new way, then, of expressing thought in oral reading. Unfortunately the beauty and strength of what the child has already gained is entirely ignored, and a new and very painful process of oral expression initiated. What is the use of oral reading? Talking enables us to see the thought in the child's mind ; oral reading, to the teacher has no other use. Oral reading, then, enables the teacher to know whether the thought is in the child's mind in its fulness, strength and intensity. If, however, the long preparation of the child in talking is overlooked, and a new and stumbling process of slowly pronouncing words is begun, the indispensable function of oral reading is entirely destroyed. The thought may or may not be in the child's mind, his half-groaning utterances never reveal the fact.

What is the use of reading? We return to our definition : reading is getting thought by means of written or printed words arranged in sentences. Comprehensively stated, reading opens to the mind all the learning and erudition of the past. To the teacher, however, it is of the utmost importance, for reading is thinking, and thinking is the mind's mode of action ; and all mental development is rightly directed toward action. Study of text books, then, if it differ from reading, the difference may be found simply and solely in intensity. In study the thought gained may be clearer and more complete than in mere reading. You can judge for yourselves then, fellow teachers, of what immense importance it is for the little child to form correct habits of reading ; and you know by experience how easily incorrect habits may be cultivated, habits that will dishearten a child in his attempts to read, and make words, instead of being clear mediums of getting thought, actual barriers to the truth they were intended to convey.

TALK III. READING.—THE WORD.

The child at five years of age has acquired ideas in their relations, has associated spoken words with these ideas, and idioms with the thoughts or related ideas. The process of learning to read, then, must consist of learning to use the written and printed word precisely as he has used the spoken words. Learning to read is learning a vocabulary of written and printed words, so that the child may get thought through the eye as he has done through the ear. It is a matter of great interest to the teacher of little ones to know just how the child acquires the spoken words. The process is a very simple one ; an object is presented and the word spoken. That is, the idea produced by the object and the spoken word are associated in one act of the mind, which we call an act of association. We all know that only by means of a mysterious mental law, called the law of association, are we enabled to recollect anything. Words are used under this law to recall ideas. The word recalls an idea after a certain number of repetitions of these acts of association. In the same way related ideas are associated with idioms or sentence forms.

Every act of the mind is affected by some stimulus or mental excitement coming either from without or within the mind. As a rule, the greater the stimulus the more effective the act. The little child, for instance, sees an elephant for the first time. The sight of the huge, strange beast stimulates the mental action of the child to an unwonted degree. The perpetual question of the little one, "What is that?" comes to his lips with great fervor. The answer, "The elephant, my child," will be likely to remain in his mind forever. The spoken word, then, is acquired by repeated acts of association. The number of these acts necessarily depends in a great degree upon the stimulus of each act. For instance, the greater the stimulus the less the number of acts of association required, and *vice versa*. What we have said of words may also be applied to the learning of idioms.

Now, the question is, in learning the new means of recalling ideas by means of the written words, should there be the slightest change in the general method? A word is used simply and solely to recall an idea. It has no other use. It can be learned only by association with the idea recalled ; and the sole question for the teacher is, to know how best to associate words with ideas. I think we can lay down this one rule as fundamental : in all the teaching and the study of the art of teaching little children to read, that that which aids directly in acts of association of words with their appropriate ideas, aids the child in learning to read, and any other method, detail of method or device that does not aid the mind in these acts, hinders the child in learning to read. To this one rule, then, all our discussion of the art of teaching reading must return. Everything must be reconciled with this or it is wrong.

The first question, then, is, What is the best way of bringing about the acts of association with the best possible stimulus? It is plain common-sense to continue the method that has developed a fixed and powerful habit of learning new words, namely, the presentation of objects as the highest and best stimulus to acts of association. This is strikingly true in teaching the first few words. The written or printed word is a new, strange object. It repels rather than attracts. No stimulus, then, can be found in the strange hieroglyphics that look more mysterious to the child than Hebrew or Sanscrit do to us. Tide the child over his first difficulties by using the active energy of a fixed habit. Simply repeat that which has been repeated thousands of times, present the object (a favorite one of the child's), and say the word, not with the lips but with the chalk. The child's consciousness is filled with interest for the object, leaving just room enough for the new form to find a

resting-place. On the other hand, try to fill the child's mind with the word itself, and you fill his soul with disgust.

The spoken word has been learned as a whole. It is more complex, and therefore more difficult to learn than the written word. Every spoken word is learned as a whole, and we have no reason to believe that the child has the slightest consciousness that the spoken word has any elementary parts. The attempt to teach him the elementary parts of a spoken word, while he is learning to talk, would prove disastrous, Why, then, should not the written word be learned as a whole? Why introduce a new process, when the old one has been so effectual? Indeed, there is no doubt that any attempt to separate the written word into parts, or to combine the parts of a word into a whole, directly and effectually hinders the acts of association, and therefore obstructs the action of the child's mind in learning to read. The tendency of unscientific teaching has set steadily and strongly for the last thirty years toward woful and useless complications in details of instruction. The return to real teaching is signalized by a strong leaning toward simplicity. The height of the art of teaching, as in all other lesser arts, is found in simplicity. Hold up the object and write the name. Say just enough to lead to the proper mental action and no more. The fewer words the better. Begin with objects. Select those objects most interesting to the child.

Next to objects I shall place sketches upon the blackboard, done in the presence of the child, so they may be associated with the names of the things drawn, and the sentences that express the relations of the objects. Third, pictures may be used effectively. Fourth, conversations of the teacher that will bring the ideas to be associated with words vividly into the child's consciousness. Fifth, stories may be told with the same result. How long should objects be used? Until the child will actively associate new words with ideas without the presence of the objects or pictures of the objects that produced the ideas. No teacher who watches the faces of her little ones will fail to note when this time has fully come.

If the principles that I have here given are true, then you will have a basis of truth for the discussion of the art of teaching little children to read. This method, to use a popular but not a correct term, may be called the associative or objective method. Learning the word as a whole, without trying to fix the child's attention upon its parts before it becomes a clear object in the mind, is called the "word method."

The question, no doubt, will arise in your minds, if the old alphabet method is entirely laid aside and the phonic method is not used at the outset for the analysis of words: How is the form of the word fixed in the mind? The answer is a simple one: The best way to fix any form in the mind is to draw it.

(To be continued.)

PRACTICAL EDUCATION.*

There is, perhaps, in no other profession so much room for diversity of opinion as in that of teaching. Nearly every teacher has his own method of doing his work, and holds that method to be the best. Nearly every educationalist has some theory to advance which he imagines should be received without hesitation by all. And when controversies occur, and disputes arise, we generally find that the result is the same: each man is so wrapped up in the littleness of his own egotism that he cannot entertain any ideas except his own.

It is no wonder, then, that in this country we should find a difference of opinion prevailing in regard to educational affairs, and we are not surprised when we meet with those who find fault with our programme of study, and, in fact, the whole educational system. There may be some things in the system that, perhaps, are not so perfect as they might be, and we honor those persons who, by calling attention to these things, and offering suggestions in a proper spirit, are endeavoring to improve the state of affairs; but we have no patience with those crotchety grumblers who find fault because they have not had a hand in framing the programme, or who, filled with the immensity of their own importance, delight to hear themselves speak, and who are never satisfied unless they are creating disturbance or discovering errors, acting on the motto that they are "nothing if not critical."

Now, among those who are decrying our school system, there is a class of persons who demand what they term a practical education, but what might be more properly styled a limited education. We believe that these people sincerely desire to do good by drawing attention to the style of instruction given in our schools, but cannot help feeling that they take an extremely narrow view of the case, and in the desire to be practical lose sight of the great aim of a public school education.

Man owes duties, not to himself alone, but to his family, to his friends, to society, and to his God; and an education that fits him only to look out for No. 1, and fails to make him a more useful member in society and in the world, is not worthy of the name of an education. Practical education should not mean a business education, and if men will twist it to mean such, then we say away with your practical education, for our object in teaching is to prepare our boys, not for one part of their after lives, but for all. Practical education includes a training that will aid in the business of after life, but it means much more. That discipline, which builds up one's mind or body, that discipline which makes a man make the most of himself in every way, is what we call practical, and we hope the day is far distant when the people of Manitoba will be led into the same error as some of those across the border, who think that when their sons are taught how to make money that are taught all. It is one of the greatest curses of America to-day that its men live with the one object in view of amassing wealth. Valuing not the comforts of the fireside, not taking advantage of the opportunities for self-enjoyment and mental and moral improvement that society offers, engrossed in the one idea of becoming rich, they not only hinder the true progress of the country and establish a wrong basis upon which they build the whole fabric of society, but convert themselves into mere machines of labor and smother out all the finer feelings and generous impulses of their nature, acting, not as beings with minds and souls, beings with duties to God and duties to mankind, but as selfish and miserly creatures who live for their own gratification.

Call English society rotten if you will, and denounce aristocracy if you please, but it is a better system of gradation for society than where money is the basis of classification. And if we educate our sons to think that the whole object of life is to make money, how can we expect this state of affairs to be remedied?

> "Mind and morals on nature's plan
> Are the genuine tests of a gentleman."

Then let us educate our children so that when they grow up they shall pay as much attention to the cultivation of the mind, and the heavenly graces as they do to personal grandeur and the emolument of wealth. Let them be men in the full sense of the word—physically, morally, and intellectually, and do not cramp them in mind, body, and spirit by having them wrap themselves up in business. It seems to me that men now-a-days, and especially men in this country, need more to learn the lesson of how to act honestly than how to make money, and I certainly think that if all our citizens

* A Paper read before the Manitoba Teachers' Association, August, 1883, by W. A. McIntyre, Esq., Principal Boys' Central School, Winnipeg.

were as well educated in morality as they are in the art of money-making, we would hear less grumbling from those who are barely able to earn their bread. It is very easy to find fault with the curriculum, but let those who criticize beware, lest in criticising they advocate something neither half so practical nor rational.

Now, I do not stand up as a champion of our programme of study, but when I look at it carefully I must say that there does not appear to be so much wrong in it after all. It recognizes the fact that up to a certain point in the education of children, the instruction must be the same, but beyond that the training must differ, just as does the occupation of the children in after years. But when children reach that stage of advancement when they are able to take a particular course of study, the programme distinctly makes provision for the same. Those desiring a commercial training can have it, those wishing to enter the professions can study such subjects as bear directly on their work. Those wishing to prepare for University find a distinct course laid out for them, and so it is for all. A general education up to a certain point, and then a special training during the rest of school life—such is the course adopted, and what can be more reasonable or better suit the wants of the people? The course of study is broad enough to meet the demands of all, and does not limit the advantages of an education to any one class. It is thorough, it is complete, and if there is any fault in the education of our children we must look elsewhere for it.

And, unfortunately, there is much fault to be found with the education given to the boys and girls of to-day, but we must be careful lest we place the blame at the wrong door. I know full well how frequently boys come forth from our schools with what is termed a good education, and yet are unable in the great battle of life to stand their ground and fight for themselves, but I do not blame our programme of study and our text books for it all, but, on the contrary, consider that they have very little to do in the matter. We can account for it in other ways. We have in the teaching profession many inexperienced and inefficient members, just as in the other professions there are many who are incompetent to do their work. Under such teachers the time of the pupils is wasted—even worse than wasted—for bad habits are formed that in after years show themselves very strongly. Persons with no knowledge of the world outside of that obtained through reading, and with no understanding as to the nature of children; unable to discriminate as to how each child should be dealt with, and dealing with all in exactly the same way, considering the chief end of education to consist in preparing children for an examination instead of fitting them for the active duties of after life; looking at the intellect of the child as the only part of its being that needs to be developed, and forgetting that moral and physical culture are equally necessary; possessing no other qualification than that they have passed a sufficiently difficult examination to be classed as teachers. Persons of this kind often take charge of the children of our land, and under their fostering care what would you expect the result to be? Can you expect lazy teachers to turn out smart pupils? Can you expect teachers who know nothing of commercial life to teach their children the laws which govern the commercial world? Can you expect teachers with slovenly, careless habits to have their children in "apple pie" order? or can you expect teachers with corrupted morals and fifthy tongues to have their pupils grow up as models in their behavior and conversation? If there is anything wrong in child education of the day as far as the educational authorities are concerned, it is right here—sufficient attention is not given to the moral and practical fitness of those entrusted to the care of children, and if the education is useless it is not because what is assigned on the programme as a study is useless, but because the teachers know not how to teach their children what is placed on the programme.

And again, we hear many men grumble about the way they were taught at school, and say that half they learnt was of no earthly use. Now if this condemns any one it condemns the grumbler, for if the education was useless why did he study so much? In nine cases out of ten these very people who grumble so much went to school and spent their whole time there, without considering what they were going to do when they left. The result is that in trying to learn everything they learnt nothing; whereas if they had decided what their course in after life was to be, and had taken a special training on that direction, they would have had all the education they desired, and would not be now complaining at the non-practical school training. If people would only use a little common sense in these matters they would perhaps lay the blame a little nearer home than the teaching they received at school. Let boys decide as early in life as possible what they are going to be, and let them study and work with that object in view, and they will find the education practical enough. But when a boy comes to school and passes through the whole course of study, without knowing or caring what he is going to do afterwards, then how can he expect that when he does turn his attention in a particular direction all he has ever learned is going to be of practical use?

And again, we might assign another reason why the education given in our schools is not as useful as it should be. Some persons imagine that when they have left school their education is completed, and forget that they have just made a beginning of it. Generally speaking, the information received in a public school is of little value; the discipline which the mind undergoes in obtaining the information is of much more account. If children leave school without knowing how to prosecute their studies independently, then their education has been a failure; for after all true education is obtained more after one leaves school than during the school period. School education may do much for a man but it will never make him a successful merchant. He may learn all the commercial arithmetic possible, and receive endless sound business advice, but the practical training is obtained only in the counting-house, and in associating with business men. Those who imagine that public schools can turn out first-class ready-made or made-to-order business men, have greatly mistaken the idea of a common school education. As well ask us to turn out full fledged lawyers or physicians. All we can do is to discipline the mind, to teach correct habits of order and neatness, to inculcate principles of morality and aid in developing the physical powers, and besides this give a little—only very little—general information. We place the children on the right track, give them directions as how they are to proceed, show as well as we can why others have gone astray, and tell them what dangers to avoid; we then wish them God speed and let them travel on alone. Yet some lazy and unreasonable creatures no sooner leave our school than they say in action if not in words,—"Now I have a pretty good education and therefore should be able to get along in the world without any further exertion on my part. If an education is any good at all it will make me get along all right." Yes, my easy going friend your school education will help you, if you only apply it properly, but if you fail to put into practice the teaching you have received, then you need not expect it to aid you in the practical duties of life. You blame the style of education because you havn't succeeded in life; turn round and blame yourself first, for not having put that education to its own proper use.

And how many parents, by their actions towards their children destroy the good effects of a sound common school education. While we educate the children to work, for work is man's grandest employment—the parents teach them to do nothing. At school all are treated alike and the rich child stands in the same relation to

his fellows as the poor one but at home every wish is gratified, and every whim satisfied, and children with rich or aristocratic(?) parents are taught to despise and keep aloof from those of the poorer classes. We encourage independent labor, but some of these parents don't allow their children to think of such a thing. In such a case as this where an evil home training counteracts any good training in school, who is to blame? If your child turns out to be a useless ignorant tyrant why turn round and blame the school education? Nor is this all. We may look somewhere else for the cause of the failures in life. All men are not of the equal ability, and it is wonderful to note how fertile in excuses are those people who do not seem to prosper as well as their neighbors. They never imagine that they are not as smart, or that they may possibly have chosen the wrong vocation but hunt round for an excuse and very frequently end up with, "Well I hadn't a proper education." The best education in the world wouldn't make some men smart, nor fit them for a position which nature never intended them to fill. There is unfortunately, a tendency now-a-days for most of our young men to run into the professions without considering whether nature intended them for such positions or not. These professions are honorable they think, therefore they will join the ranks. They turn out failures and blame their early training of course. It is surely time that some of our men who have proved themselves failures have found out where to place the blame, and it is surely time that men were beginning to understand that "man makes the business honorable" instead of the "business making the man honorable," that to be an able and efficient hod-carrier is better than a sickly, incompetent, one-horsed member of the legal or medical profession. We can perhaps account for more failures in life through indiscretion in choosing a profession than in any other way.

Then away with this cant, about our education of to-day not suiting the wants of the people. Place the fault of failures where it should be in the majority of cases, with the people themselves, and do not rave at our educational system and programme of study. Let our teachers know how to impart what they know and know what to impart; let them be practically qualified for their positions, having in every case received a thorough professional training before entering on their work; let them be men and women that are able to understand children and able to guide them; in short, let them be persons that nature and education have fitted for the position. Let parents exercise a little more care in the home training of their children, for home influence is always more telling than that of the teacher, let them use a little common sense and discretion in educating their children, and not treat them when in their "teens" as babies of a larger growth. Let our boys decide early in life what their course is to be and let them use all their energies in that direction: let them consider carefully before entering on any course, and choose that which nature has intended them for; let them consider that school and college education never yet made and never will make a thoroughly educated man, that these are only means to an end. Let all these things be attended to, and I feel confident there will not then be as much fault found with our programme of study and system of education.

There is one point more on which I would like to say a word or two, and that as briefly as possible. There has been much said lately as to the style of teaching particular subjects, especially grammar, arithmetic, composition, and history, and there is much ground for some of the complaints made if the complaints were only based on fact. But they are not in the majority of cases, for persons looking at the style of instruction twenty years ago, when they went to school, and supposing that of to-day to be precisely the same, of course make many suggestions that are good, forgetting, however, that educationists have discovered these errors before them, and have rectified them; forgetting that the style of teaching of this day is in many respects superior to that of their day, and that as great progress has been made in the science of education lately as has been made in most other things.

You say, "There is too much manual labor in arithmetic." We say, "You are right," and you will notice how mental calculation is encouraged by every live teacher. You say, "There is too much time devoted to this subject." We say, "The time may be wasted sometimes, but it certainly takes longer to teach an ordinary child the elements of arithmetic than it does the elements of grammar or history. He can study the last two subjects unaided, the former he can't."

You tell us our grammar is not practical enough, and does not teach children how to express themselves properly in speaking and writing. There may be much truth in the statement, but it would never do to restrict grammar to mere correction of false syntax. We believe it is wrong to place a text-book on this subject in a child's hand until he can consider the subject philosophically, but it should be taught from the very beginning of school life in connection with composition, object lessons, etc., where children are supposed to express themselves. But grammar, as a study for advanced pupils, gives, we consider, better exercise for the reasoning powers than any other subject, arithmetic and Euclid not excepted. And this is one reason we would advance in favor of the teaching of philosophic grammar; but we would not mean by that to throw overboard the grammars teaching the subject practically. The proper school should be a grammar class all the time in one sense, because mistakes in expression should always be noticed, and if the subject were taught in that way it would do much more good than placing a text-book of any kind in the hands of the pupils. We cannot expect rapid improvement in the mode of expression used by our children, because home influence and the company of play mates often undo what teachers have done in this matter.

Promotion Examinations.

GEOGRAPHY.

CLASS III.

1. Draw an outline of Lake Ontario and mark the ports on the Canadian side and the mouths of all the rivers that empty into the lake.
2. How do villages, cities, and towns differ? About how many of each are in Ontario?
3. Trace the course of a vessel from Duluth to Halifax.
4. Which is the wealthiest and most intellectual province in Canada? Give reasons for your answer.
5. By the use of a drawing show that you know the position of the cities of Ontario and the railroads connecting them.
6. What are the principal natural products and industries of each of the provinces of Canada?
7. Draw a line indicating the boundary between Canada and the United States.
8. Give the State and part of the State in which each of any fifteen cities is situated.
9. Trace the course of the Grand River from its source to its mouth. Where do the railroads cross it? Mention the uses of this river.

ARITHMETIC.

CLASS III.

1. How are fractions reduced to a common denominator?
   Reduce $\frac{4}{5}$, $\frac{7}{10}$, and $1\frac{1}{2}$ to equal fractions having the same numerator.
2. Divide $\$13\frac{1}{3}$ between two boys, so that one may have $\$2.50$ more than the other.
3. John can do a piece of work in $5\frac{1}{3}$ days, James can do it in $3\frac{1}{2}$ days; in what time can both do it?

4. Find the five smallest numbers that will exactly contain the sum of $2\frac{1}{2}$, $3\frac{1}{3}$, and $4\frac{1}{4}$.

5. How does least common multiple differ from highest common factor? Show that we cannot find the highest common multiple of two or more numbers.

6. If $\$197\frac{1}{8}$ be divided by the sum of $\$7\frac{1}{3}$ and $\$8\frac{1}{2}$, how many cents will be left?

7. A grocer sells $14\frac{1}{3}$oz. for a lb.; how much must he apparently sell to cheat his customers 21lbs.?

8. Ten pounds of coffee are worth $5\frac{1}{3}$ lbs. of tea; how many lbs. of tea are value for 30 lbs. of coffee?

9. $\frac{5}{8}$ of John's money is equal to $\frac{7}{9}$ of Henry's; both have $1,000; how much has each?

LITERATURE.

CLASS III.

1. Tell in your own words the story of 'Grace Darling.' How was she led to believe she had done something wonderful?

2. What steps were taken to overcome John Adams' dislike for Latin? Mention what you think admirable in John's conduct.

3. Give the meanings of the words, hero and heroine. Name as many as you can from the Third Book, and in each case tell how the name is deserved.

4. Write some verses that are hard to understand from the 'Mouse's Petition.' What is the meaning of the one beginning with the line, 'Beware lest in the worm you crush.'

5. Some words are pronounced alike but spelled differently; give from your reading lesson ten pairs of such words.

6. Mention instances of sagacity in animals. Do animals reason? If you think they do, cite an example Show by an example that you can reason.

7. From some lesson in the Third Book show that one person's conduct influences that of another.

8. Explain the word 'fidelity.' Give in your own words the substance of the lesson headed 'Fidelity.'

9. By examples show that you understand the use of these marks used in your reading lessons—? ! " " . —.

COMMON THINGS.

CLASS III. AND IV.

(These questions are for discussion by the teacher and pupils.)

1. Why can a boy throw a stone farther than he can throw a straw?

2. The rain falls and a balloon rises. Give the reasons.

3. Trace the course of hail, rain, and snow from large bodies of water till they fall on the other.

4. Why does sprinkling cold water on a floor make the air of a room cooler? Would warm water do the same?

5. As we go up it gets colder; as we go down it gets warmer; give the cause. What is meant by the words cause and effect?

6. Tell why a boy's sleigh has iron shoes on it. Why has his waggon iron tires?

7. Iron sinks in water, some wood will not do this. Give the reasons.

8. Which is the better time to get your lessons, the morning or the evening?

9. Name a few common occurrences which you do not understand.

LITERATURE.

CLASS IV.

1. State the position of the government of Peru on the approach of the Spaniards.

2. Draw a map of the north-western part of South America and mark on it Quito, Caxamalca, and Cuzco.

3. Give Pizarro's plan for getting possession of Peru. State the circumstances which were favorable to his success.

4. What is a Dominican friar? Detail the part taken by a friar in the defeat of the Inca.

5. How do you account for the slaughter of so many Peruvians while only one Spaniard was injured?

6. Account for the enormous amount of gold and silver secured by the Spaniards.

7. By what means did Pizarro try to govern Peru? What opposition finally destroyed him?

8. The people of South America are principally Roman Catholics; how do you explain this?

9. Give the meanings of—dexterous, audacity, remorseless cruelty, descendants of the Sun, simultaneous discharge, incredulous, ransom, assassinated, revenge, rebellion, and insurrection.

HISTORY.

CLASS IV.

1. Give instances from English history of eminent persons being guilty of treason. State as fully as you can those offences which are called treason.

2. Detail the steps taken by Britain to acquire one or more of her colonies. Mention any advantage it is to Canada to belong to Britain.

3. Rebellions are often followed by concessions. Cite instances to prove the truth of this statement.

4. If you can, show that some monarchs had both a parliamentary and hereditary right to the throne of England. In case of conflict discuss which right should prevail.

5. What is the nature of the troubles now disturbing Ireland? What remedies have been proposed? Give as well as you can the cause of Irish distress.

6. State the cause of the recent Egyptian war. Was it just or unjust? Why did Bright withdraw from the Cabinet during the war?

7. Name some of the leaders of political thought in Canada. What is the difference between a Conservative and a Reformer?

8. Tell what you know about the causes of the American Revolution.

9. Why are there better scholars in Britain than in Canada? Mention some of the leading scholars of Canada.

GEOGRAPHY.

CLASS IV.

1. The discharge of rivers nearly measures the amount of evaporation; explain this statement.

2. Why is it colder the higher we ascend? Are houses constructed to keep the heat in or the cold out? Give reasons for your answers.

3. Give reasons for thinking the Frigid Zones are colder than the Temperate. Account for the lines that bound the zones.

4. At one place it is 9 a.m., at another it is 10:30 a.m.; how can this be? Find how far they are apart, and why one is farther east than the other.

5. Which is ice or water the heavier? State reasons for your answer. Which would ice or water the better protect a substance easily frozen?

6. By means of a diagram show that we cannot see a ship because there is water between our eye and the ship. State why you think the surface of water is round.

7. Tell all you know about the formation of coal. Mention the principal places in which it is found. Show that coal and iron are often found near each other.

8. Mention some of the forms of water. Is there any water in vinegar, molasses, cider, blood, mercury? Give reason for your answer.

9. Why is it healthier to live in the west than in the east of a town or city? Which is the north or south of a town or city the healthier?

ARITHMETIC.

CLASS IV.

1. John can do as much work in $4\frac{1}{2}$ days as James can do in $3\frac{1}{7}$ days; together they complete a job worth $21; How should the money be divided?

2. A man pays $.5\frac{1}{2}$ cents out of every $\$3\frac{1}{3}$, and by so doing his money is diminished by $25; how much had he at first?

3. Find the interest on $39.60 for 89 days, when the interest on $150 for nine months is $11.25.

4. An acid is composed of hydrogen, sulphur, and oxygen, there being respectively 2 parts, 32 parts, and 64 parts of each in its composition; find the weight of each in a ton of the acid.

5. Divide $7,000 dollars among three men so that the first may have twice as much as the other two, and the third $80 more than the second.

6. A roller is 10 feet long and 12 feet in circumference; how many times will it turn while rolling a field containing nine acres?

7. By selling 37½ inches for a yard, I lose $40; the cloth being worth 80 cents per yard; how many yards did I sell?

8. What is the smallest number that can be added to 189$\frac{11}{12}$ so that the sum may exactly contain 12$\frac{1}{4}$?

9. What is the difference between 7½ sq. ft., and 7½ ft. square?

GRAMMAR.

CLASS IV.

1. Compose sentences to show you understand the use of the comma, period, exclamation mark, and point of interrogation.

2. By means of examples show that the same word may be used as different parts of speech. What is meant by a part of speech?

3. Write a list of words having silent letters. How do we know when a letter is silent?

4. Give examples of the following sentences: (*a*) Compound; (*b*) Complex; (*c*) Simple; (*d*) Ambiguous; (*e*) Affirmative; (*f*) Negative.

5. Name the moods. Illustrate each by an example. What is the difference in meaning between: "If I was there" and "If I were there?

6. Analyze: "*Mankind can* hardly *be* too often *reminded* that *there* was once a *man* named *Socrates*, between whom and the legal *authorities* and public opinion of his time, there took place a memorable collision."

7. Parse the italicized words. Rewrite, changing the voices of the verbs. Give meanings of all the words having three or more syllables.

8. How do you know when analyzing what should go in the completion and extension?

9. Carefully write six common rules of Syntax. Explain how each may be violated.

DRAWING.

CLASS IV.

1. Classify angles and triangles. Draw one of each and write its name opposite.

2. Name the different kinds of four-sided figures. Illustrate and define each.

3. Define radii, diameter, circle, circumference, chord, arc. Make a drawing and write the name of each of these terms on the part that explains the term.

4. Make all the letters of the alphabet that can be made without the use of curved lines.

5. How do the diameters of an ellipse differ from those of a circle? Tell how to lay out an elliptical plot in the garden.

6. Draw a right angled triangle. On one side describe a square; on another, an oblong; on the other, an isosceles triangle.

7. Show by diagram that you understand the division of the earth into zones.

8. What is the difference between the curve of a circle and that of an ellipse?

9. Give an example of one or more of those forms that you think the prettiest.

A good story is told concerning the first nomination of Col. Pickett as State Supt. of Schools of Kentucky, near the close of a long nominating convention for State officers. Gen. Breckenride, a leader in State politics, rose, under the five-minute rule, and said: "During the late war there was a chaplain in one of our regiments who distinguished himself by great self-sacrifice and self-forgetfulness. I have seen him with my own eyes care for the wounded, administer medicines and comforts to the sick and suffering, and consolations to the dying. On one occasion I saw him aid a Northern soldier, and he actually took the shoes and socks from his own feet and put them on the feet of a suffering and needy enemy. In view of such noble action to friend and foe, I take pleasure in nominating J. Desha Pickett, the chaplain to whom I have referred, for the office of State Supt. of Public Instruction." The speech was electric, and when Adams Co. was called, the chairman of the delegation arose and announced, "Adams Co. gives thirteen votes for 'Old Socks,'" and the whole convention followed with a burst of applause that was unprecedented, even in the enthusiastic Democratic State of Kentucky. It is needless to say that "Old Socks" was elected, and still holds the educational fort.—*New England Journal of Education.*

Sing on! we sing in glorious weather,
Fall one step over the tiny strand;
So narrow, in sooth, that still together,
On either brink we go hand in hand.

Jean Ingelow.

Practical Department.

ARTIFICIAL STUPIDITY.

Stupidity is of many kinds, and springs from a variety of causes. There is a stupidity which manifests itself in general intellectual incapacity; there are special forms of stupidity showing themselves in particular directions, but quite compatible with great intellectual ability in other respects. Stupidity, both general and special, is, in some cases, natural; in others it is artificial. Natural stupidity runs in particular families and races; it seems to go with certain bodily characteristics, and to be developed by certain physical environments. Thus the Bœotians had a bad repute for intelligence among the quick-witted Athenians, though opinion has been divided as to the cause of their stupidity, some referring it to the sensuality induced by the extraordinary fertility of their country, others to the dampness and thickness of their atmosphere. Every country has within its own limits certain districts that have a similar ill-repute. It would be invidious, perhaps, to name districts in our own country famous for the stupidity of the inhabitants, but familiar instances will doubtless occur to most of our readers. Happily there is no form of stupidity which does not yield to judicious treatment. Some of the most illustrious men and women the world has ever seen were notoriously dull and stupid as children.

It is a serious matter, however, to reflect that large numbers of children, naturally sharp and clever, are rendered stupid by bad teaching and bad training. It is marvellous what the least promising children learn, with no other books than dolls and balls and pebbles, and other such unpromising manuals, and with no other instructors than ignorant servants and little brothers and sisters. They acquire a considerable knowledge of the external world: they learn how to use their own bodily powers; they pick up a language which they use with the greatest fluency; they show an intelligent interest in the rudimentary stages of literature, science, and art; they are most eager after information, and sometimes risk the pains of martyrdom to acquire it. Well might fond parents be astonished, as they almost invariably are, at the precocity of their children, and anticipate for the most hopeless of them an extraordinary future. The most dispassionate observer might be led, by what children learn in the first three years of their lives, to expect that they would become prodigies of learning and ability by the time they reached maturity.

But a curious change frequently happens as soon as the child is sent to school. His mental activity is at once arrested; his curiosity abates; his powers of acquisition fall off; he becomes dull and heavy and slow of apprehension. The budding genius has, somehow been converted into something very much like a dunce.

It will not be unprofitable to inquire into the cause of this deterioration. If the effort of school education be to repress those powers that it is supposed to call out, it would surely be better to leave children to the teaching of Nature, who, as we have seen, makes something out of the dullest of her pupils, and that in the pleasantest fashion. The most obvious cause of the failure of formal education is the neglect of natural laws. We are in too much of a hurry. Instead of adapting our teaching, as Nature does, to the child's developing powers and growing needs, we ply our little pupils with knowledge about which they do not and cannot care, with the inevitable effect of disgusting them with learning and delaying their mental development. We fly at once to a book as the instrument of education, and the first thing we do with the poor little child, who has hitherto taught himself from the illuminated pages of his daily surroundings, is to set him learning certain cabalistic signs which represent no ideas, and in which it is im-

possible for him to find any intrinsic interest. As soon as he has mastered the symbols which represent words we set him to acquire all sorts of second-hand knowledge; we give him oral lessons, in which we too frequently throw away every opportunity for developing his intelligence; we collect his facts for him; we classify them for him; we name them for him; we define for him the names we employ; we reason from the facts for him; in short, we do everything that is likely to render him stupid for life. It would be quite as reasonable to expect that he would grow physically strong, if we ate and drank and took exercise for him, while he looked quietly on. We get rid of his brains, as somebody said, to make room for his learning; we crush out his native intelligence under pretence of developing it; we load him with knowledge, but prevent him from acquiring the power of making a wise use of it.

The transition from the school of Nature to our so-called schools is at present too abrupt. The infants' school teacher should pay greater attention to children's instincts and natural tastes, and use them to a much larger extent as instruments of education. Children learn more from things than from words, and should obviously be first taught through things; they learn more quickly by doing things than by hearing about them, and action should enter, therefore, very largely into their school occupations. Kindergarten enthusiasts would not allow children to learn to read and write until they were seven or eight years of age. We would not wait so long as that; but we are confident that children would gain in intelligence, in the long run, if we were not in such a hurry to teach them the three R's.

Children are made stupid in the later stages of education by burdening their memory with knowledge which they have never digested, and are consequently unable to assimilate. Knowledge of some sort must, of course, be acquired in school; but it should be mainly such knowledge as will be instrumental in acquiring more, when the mind will be riper to receive it, and the value of it will be more keenly appreciated. The new code will confer no greater benefit upon the rising generation than that which is involved in the increased importance it attaches to intelligence; but it is useless to insist on intelligence so long as demands are made for indigestible knowledge that stifles intelligence. If our children are to retain the spontaneous mental activity of infancy; if their school life is to be bright, joyous and natural; if they are to escape becoming "bookful blockheads," we must care less for what they know, than for what they can do; we must be content to wait till they have reached a suitable age before we impart to them knowledge which at present only serves to render them more stupid. Childhood is the age for acquiring mental tools and learning how to use them, for forming healthy tastes and learning how they are to be gratified. It is not without its appetite for knowledge; and we are far from suggesting that this appetite should not be ministered to; but let us supply it with the kind of knowledge it spontaneously asks for; when it asks for bread, let us not give it a stone; and let us not forget that mental development is of far greater importance than mere knowledge. Knowledge may be forgotten; all knowledge acquired in early life, unless it be constantly used, is almost sure to be forgotten; but intellectual power is a possession that cannot be lost. Nay it will go on increasing.—*The School Guardian* (Eng.)

At the semi-annual meeting of the N. E. Assoc. of Supts., held in Boston, Friday, May 25th., the subject of arithmetic in Grammar Schools was discussed by Supt. G. T. Fletcher, of Maine, as follows:—

"The average American citizen needs to understand *thoroughly* the application of notation, numeration, addition, subtraction, multiplication, and division, to integers, decimals, and common fractions, to be familiar with the processes of reduction and mensuration, and the application of the principles of percentage to business transactions. These subjects comprehend nearly all that is of practical use in arithmetic. For mental discipline the proportions and roots may be studied. A large percentage of our pupils go from the grammar school directly to life's duties; hence, what is there learned should be well learned. Many subjects treated in arithmetical text-books are of no practicable value to most pupils. Non-essentials should be eliminated, and what remains be mastered. Arithmetic is valuable for mental discipline, but this can be secured only through work. The blackboard has wrought some harm as well as much good. There is too much chalk-work and too little brain-work. The pupil should be taught to *think* before doing, and to prove his work. The tendency of answers, printed with the problems, is to destroy the pupil's confidence in his own work outside of the book. More attention must be given to clear analysis, and mental arithmetic should be taken with written. Much that is well taught will be held as mere facts in memory, but, if thoroughly learned, it can be used in practice, and as the pupil's mental powers mature it will be understood. The reasoning powers cannot be forced. There must be persistent drill in the fundamental rules. Fractions should be presented by illustration, and the terms, relations, and changes in form and values made clear. Many problems should be given,—first, to illustrate principle, second, to afford the practice necessary to impress the principles and methods upon the mind. They should not be too complex, confusing the mind. Reduce the subject matter of most of the text-books from a third to a half; select wisely, and teach thoroughly, keeping these objects in view as the objects to be attained,—to obtain a knowledge of the properties of numbers; to secure skill in their application to business; to give practice in mathematical reasoning; and to attain precision in the use of language."

ARITHMETICAL MATCHES.

The September number of the *Journal* contained an interesting article from the *Pacific School Journal*, describing an *adding match*. Such exercises tend to secure *accuracy* and *celerity* in arithmetical work, as forty-five years of school-room experience has proved to the writer of this article. The boys sometimes call them "single skull races."

An example of work in multiplying that many of my pupils have worked correctly, with as much alacrity as they would play a game of ball, is to find the product of—

9,582,653,477,982,169
Multiplied by 8,795,631,824,673,912

The ans'r is f'nd to be 84,285,491,895,672,114,131,600,175,475,128

The practical worth of such work is more that the oral reciting of the *multiplication table* as many times as there are units in the product.

Another good example for a multiplying match is to find the twenty-seventh power of 8. Surely a boy or girl, with slate and pencil, can do what Daniel McCartney, who was almost blind, did mentally. He found the required power to be—

2,417,851,639,229,258,349,412,352.

Pupils who know all about cube root will like to find the cube root of—

123,456,789,123,456,789,123,456,789.

It will be interesting to know if the number 216,895,848,347 is prime, or if compound, what are all the factors?—N. B. WEBSTER, in *Virginia Educational Journal.*

SCRIPT OR PRINTING, WHICH?

The question as to whether primary children shall be taught script from the first is frequently asked and variously answered. A few years ago printing was the universal rule, and in many schools it was continued up to and through the Third Reader grade. The time which the printing was practised before the change to script writing was made, gradually grew less, until now it is altogether omitted in many schools.

The strong tendency now is, in many of the best schools, to begin with the script at once. Good primary teachers who have tried the plan of printing for a few months and then changing to the script, and also the plan of beginning with the script at once, are uniform in their testimony in favor of the latter method. They testify that the script form is much more easily made, and that there is little or no difficulty arising from the fact that the child is at the same time learning to recognize the printed form from the chart or primer.

Why is there a script form at all? Why not conform all writing to the printed form, and thus have but one? The answer is that the script forms are much more simple, and more easily and rapidly made, *and save time.*

What is true of grown people is true of children. Should not the simplest form be given to the child, and does it not need to economize its time? The arguments seem overwhelming in favor of script from the beginning, and script only.

In the Indianapolis schools, Supt. Tarbell has given orders that in the "first year" all writing shall be done with slate pencils, and that the stress of the instruction shall be upon *form* of letters, little attention being given to the manner of holding the pencil. At the beginning of the "second year" the children begin to write with pen and ink, using tracing books, and the chief attention is given to "position" and the proper holding of the pen. The lead pencil is used only for drawing. By the use of the tracing book and the "form" already determined, the child can give its entire attention to the position of hand and body, and can easily be *drilled* into good habits. By discarding the use of the lead pencil for writing purposes, the difficulties of too great pressure and cramped position of fingers are largely avoided. The transition from the slate pencil to the pen is great, and the child feels that it is entering upon a new study, and is ready to cheerfully conform to all requirements.—*Indiana School Journal.*

Some recent experiences have brought us in contact with several young "lady teachers," of considerable acquirement and fair capacity for successful work, who seem never to have heard of any superior method of instruction, or only heard of it as a mischievous whim to be ridiculed and resisted. Our most accomplished principals and superintendents perhaps find the most serious obstacles in these inexperienced subordinates, who having no intention of making school-teaching a profession, resist or avoid all decisive effort to grasp the secret of their difficult work, or from "experienced teachers" as fully resolved not to be coaxed or driven out of the little comfortable corner of routine work which they have come to regard as their special preserve during their own good pleasure. All this is a very different thing from that genuine independence which insists on seeing its own way, and being forced into no dealing with a child for which it cannot discover a good reason. Such independence should be encouraged, especially when joined to persistent effort at improvement and thorough consecration of purpose. But the kind of resistance we indicate has no claim to respect or toleration, and is always a sufficient cause for a change in the teaching-force of any school.

HER SPECIALTY.

"What is your specialty?" said I, the other day, looking out over the top of my spectacles in a mildy-wise way at a fair young teacher who sat in authority over forty or fifty mischief-loving boys and girls, ranging from seven to ten years of age.

"Good manners," said she, promptly, smiling back at me in a way that made her remark a perfectly pleasant one. "At least, that is what they say, here in the building."

"Do you find the practical working of it brings about good results at the end of the year?"

"As good as the average and sometimes better. I hope I *can* teach something else, but I am willing to confess I give much of my time to my pet hobby, and find it helps me greatly in my regular school work. Would you like to look at my reports for the last few years?"

"You do not believe in corporal punishment, I see," said I, pointing to a column with no entries for several months.

"When positively necessary," said she; "but for three years I have not had a case of whipping in my room."

"And to what do you lay this?"

"I think I can venture to say—politeness, supplemented by unvarying kindness and patience."

Just then she was called out of the room for a few minutes. I am always fond of getting opinions of pupils themselves, on various subjects connected with their school-life; not because they are generally correct,—do not imagine that for a moment,—but one can often draw an inference and strike a pretty fair average by hearing all sides. So, as soon as she left, I pointed to a rough-looking little fellow near the front row and said,—

"What kind of a school do you think this is, my boy? A pretty good one?"

"It's the politest one in town," answered he, promptly, "and we've got the politest teacher, too."

Several heads, round about, nodded approval.

"Good sentiment," said I, "but poor grammar. Well, what makes it such a polite school? Can any one tell?"

Silence for a moment, then another little chap, in the next row said naturally enough:

"Guess it must be teacher."

"How does she do it?" asked I. "Does she make you mind pretty well?"

"Oh, she don't boss us around, you know. She always says 'please' and 'thank you', and a fellow don't mind doing things when he ain't got to, unless he has a mind to."

Commend me to ignorant and unthinking childhood for discovering the underlying motive that governs much of the conduct of mankind! I had discovered the secret force of this teacher, and saw that her school could be said almost to govern itself.

After the close of the session, I noticed a sulky, disagreeable looking boy who remained at the desk after the others had passed out. The teacher went over to him, and I could hear some low, earnest words from her and a few short answers from the boy. Presently he took up his book and slate and went to work with a will.

"I have conquered him," she said smilingly, as she came back to me. "He has been idle and sulky all the afternoon."

"What did you do?" asked I.

"I left him alone until all the others were gone; then I asked him if I had ever been unkind to him. He said 'No.' Had I ever done a rude thing to him? 'No.' Then why should he be both unkind and impolite to me? I showed how he had displayed such feelings towards me by refusing to do what I thought a proper mount of work. He is both ashamed and repentant now."

On my way out, I passed a group of boys playing marbles. I stopped to watch the game, and fell into conversation with one little fellow, whose face I thought I recognized. He talked with me about the game for a moment, and then, as if a sudden thought struck him, pulled off his cap.

"What made you do that?" said I.

"Teacher says we always must, to old people." I would willingly have been twice as gray as I was, to hear that remark, and to see such a result of some one's good work.

"Have I seen you before, this afternoon?" asked I.

"Yes, sir. You have just come from my room."

So the good seed is bearing fruit already, thought I.

I afterwards learned, from frequent visiting in the building, that this teacher had so established the pleasant reputation of her room that children from lower grades looked forward to it as a sort of Mecca, in their pilgrimage through the course. I give the incident and experience for the help of young teachers, and I pray for the increase of such a spirit of kindly and beneficent rule in our schools.—*A. N. Everett in The American Teacher.*

THE BEST METHODS OF PUNISHMENT.

After the reading of the minutes, and other business, *Mr. Taylor*, from Battersea Training College, proceeded to read his paper on "The Best Methods of Punishment." He said that the methods of punishment in general use had of late years improved most wonderfully, the only punishment used to be that of the cane, sharp indiscriminate, unbounded. Now gentle measures were much more common. The objects of punishment were threefold: (1) the vindication of a broken law; (2) the preventing others from following a bad example; and (3), the reformation of the offender. The first of these should have no weight attached to it. The second was a sound reason, but, by itself, inefficient; the third, however, was a matter of very vital importance. The first two reasons were apt to make us always use the same punishment for the same offence, a thing which the third would not allow us to do—for the physician did not always cure the same complaint with the same dose. He would be thought clumsy if he tried to do so. In the same way the schoolmaster would not get on if he tried to correct the faults of very different characters by always using the same means. Offences might be classified into four divisions, which, indeed, overlapped and ran very much one into another: (1) Offences of carelessness, restlessness, listlessness, and trifling; (2) habitual forms of the former division; (3) such offences as wilful disobedience and damage to property; (4) grave offences, such as lying, thieving, indecency in word or deed. These offences must be dealt with, as had been said, with a view to the reformation of the offender, the other two objects of punishment might be left to take care of themselves. The best forms of punishment then were those which must reform the character. For the first division of offences, the ordinary rules of class management would be enough, and for these, and indeed for most of the others, indirect punishment—the word, the look, the loss of some little privilege, even the privilege which gives a good deal of trouble—were extremely valuable for some natures, and were most readily adjusted to the different characters we might have to deal with. Punishments were generally good when they followed naturally from the offences. A child ten minutes late might fairly be kept in ten minutes after school, a carelessly written copy should be re-written in play hours; but this general principle was not always true. A child irreverent at prayers must not be made to kneel down for a certain time; a child must not be made to hate his poetry by having an immoderate quantity given him to learn. A system of marks and prizes had helped him marvellously in avoiding punishment, the only drawback being the trouble; but every form of punishment except the rod gave trouble, and the marks only took five minutes each Friday. Mr. Taylor concluded by referring once more to the cane. He did not mean that it could be entirely dispensed with, but the less it was used the better would be the discipline. It should be kept only for the gravest offences and the worst cases.—*School Guardian.*

The Teacher MUST:—

1. Keep good hours. 2. Have plenty of sleep. 3. Walk, or take other out-door exercise. 4. Take this exercise regularly every day. 5. Laugh and be cheerful. 6. Avoid *fretting* over school troubles. 7. Devote at least one night per week to social duties. 8. Have variety, both of work and of recreation. 9. Wear loosely-fitting garments. 10. Avoid drafts of cold air and wet feet. 11. See that his *sleeping*-room (as well as his school-room) is ventilated daily. 12. Protect and preserve the eyesight. 13. Have shade over lamp or gas-jet at night. 14. Be clean. 15 Neither *sit* nor *stand* too much during school-hours. 16. Avoid round shoulders and expand the chest by the use of dumb bells, calisthenics, etc. 17. Sit and walk upright. 18. Take care of the teeth. 19. Eat plain nutritious food, and avoid pastry. 20. Have pure air, pure water, good food, light clothing, and moderate exercise. 21. Understand the functions of the different organs of the body, and not violate the laws of nature.

The Teacher MUST NOT:—

1. Eat too much. 2. Drink too much (avoid strong tea or coffee). 3. Smoke tobacco. 4. Drink intoxicating liquors. 5. Take drugs, and (so-called) "patent medicines." 6. Over-work either mind or body. 7. Read novels until 1 o'clock in the morning. 8. Keep school-room too hot or too cold (about 65° Fahr). 9. Take violent exercise immediately before or after meals. —*J. A. Wismer, H. M., M. S., Parkdale, Ont.*

THE STUDY OF MENTAL ARITHMETIC.

The study of mental arithmetic, it seems to us, does not receive that degree of attention in our schools that its importance demands. There are many of our best schools in which this subject is not taught as a regular exercise in the grades above the primary. Why is this? Partly, no doubt, because it is crowded out. Teachers are obliged to use text-books of written arithmetic that have few or no mental problems, and neither they nor their pupils have hardly the time, it would seem, to take up a separate text-book on the subject. The result is, teachers content themselves with giving their pupils, from time to time, a few oral examples, general exercises, etc.; and this is the amount of training pupils get.

Another reason why the study has been so largely discarded is to be found in the fact, that it has been so sadly mistaught by many teachers who persisted in loading down the solution of problems with long-drawn-out formulas and analysis that required minutes of dull repetition of verbiage, where seconds of brief but logical explanation would have sufficed far better.

Conducted in the old way the study became monotonous and tiresome to both teacher and pupils, and consequently both were glad to get rid of it. But, when properly conducted, there are certainly few exercises that pupils can engage in that are more stimulating to mental activity than mental arithmetic. It is a most excellent drill for obtaining fixedness of attention, both in the individual and in the class. It cultivates the memory, since the conditions of the problem and the practical results must held in the mind while the reasoning process and the calculation go on. It cultivates

accuracy, independence of thought, and that clear, logical analysis which is so desirable and useful an acquisition.

It educates the pupil in the exact use of language; and the habitual concentration of the mind upon a subject requiring close, accurate analysis develops in the pupil those habits of self-control and self-reliance, which are no insignificant part of a good education.

It has the advantages, also, of being a useful or *practical* study. In the ordinary affairs of life there is nothing except reading and writing that will be of more practical use to the pupil than readiness and skill in solving arithmetical problems mentally.

But shall we separate mental and written arithmetic and teach them independently? This need not be done. A separate text-book seems to be necessary, but the same subject may be taken up in each, and thereby each will assist the other.

Let it be remembered that it is not enough that teachers approve of this study; pupils must really do the work, must daily practice the analysis of examples, besides any oral work given to the school at large.—*C. P. Cary, Hamlin, Kan., in N. E. Journal of Education.*

SIX PRINCIPLES OF PEDAGOGY.

1. Education should proceed from the known to the unknown, both in the choice of subject and in the method of instruction. Lessons should start in the concrete and end in the abstract. Instruction should rise from particulars to generals.

2. As the blood is the life of the body, so memory is the life of the mind. It should be assisted by all possible means, and its worst abuse is to require pupils to memorize what they do not understand.

3. All mental development is an advance from vague conceptions to definite knowledge. Definite knowledge implies familiarity with the subject, and this familiarity comes of much repetition.

4. The chief office of instruction is not to impart knowledge, but to teach the pupil how to obtain it for himself. Books are supplementary. The process of self-development must be encouraged to the utmost.

5. Study must be made interesting either in its subject or its results. All subjects may be made interesting by emulation.

6. Order is a vital element of instruction, because it enables the teacher to concentrate all the educative agencies of the school without embarrassment or interruption.—*E. S. Clark.*

THE BOAT THE GNATS BUILD—Did you ever hear about the wonderful boats the gnats build? They lay their eggs in the water, and the eggs float until it is time for them to hatch. You can see these little egg rafts on almost any pool in Summer.

The eggs are so heavy that one alone would sink. The cunning mother fastens them all together until they form a hollow boat. It will not upset, even if it is filled with water. The upper end of these eggs is pointed, and looks very much like a pocket flask.

One egg is glued to another, pointed end up, until the boat is finished. And how many eggs do you think it takes? From two hundred and fifty to three hundred. When the young are hatched they always come from the under side, leaving the empty boat afloat.

These eggs are very, very small. First they are white, then green, then a dark gray. They swim just like little fishes, and hatch in two days. Then they change again into a kind of sheath. In another week this sheath bursts open and lets out a winged mosquito. It is all ready for work. There are so many of them born in a Summer, that, were it not for the birds and larger insects, we should be "eaten up alive."—*Our Little Ones.*

One of the clearest evidences of the increasing favor with which co-education is received is found in the failure of so many female academies. A contemporary says it could name a dozen or more in Ohio and Indiana, where the appointments and accommodations were very complete, but have ceased to exist, and their buildings have been converted into hotels, asylums, or factories. There was a rage twenty, thirty, and forty years ago to build high schools and colleges for young ladies, but lately every new enterprise in those States aims at co-education.—*New England Journal of Education.*

Notes and News.

ONTARIO.

The closing exercises of the Toronto Normal School were held in the theatre on the evening of Jan. 31st. Principal Davies presided with his usual felicity. The graduating students gave quite a rich treat to the audience in the form of well rendered music, under Mr. S. H. Preston as conductor, and a series of readings and recitations which were all creditable and some of first-rate quality. Misses Alexander and P. C. Scott especially distinguished themselves by the grace, purity of utterance, refined taste, and fidelity to character with which they rendered some delightful passages from Shakespeare. Miss Henderson, and Messrs. Fry, O'Donnel, Chapple and McDowell also acquitted themselves in a manner which gave practical demonstration of the value of the training they had just undergone. Miss Lewis, the well-known elocutionist, gave an admirable recitation, near the close, which won her the hearty thanks of all present. Dr. J. A. McLellan in a short address referred to the spirit of discontent and ceaseless faultfinding abroad among teachers. He pointed to the proceedings of the last Provincial Association as a good illustration, and put the young teachers on their guard against the spirit of petty, carping criticism. He went on to show the immense progress made in educational affairs during the last thirty years, and claimed for the Ontario system in all matters of vital importance, a place in advance of any other system among the English-speaking peoples. He recommended the students to hold no mean opinion of our system which was furnishing a model to New England school authorities. The Doctor next directed attention to the educative power contained in literature and cautioned them against the supreme absurdity of turning the study of literature into "grammatical hair-splitting," the uses of "buts and as-es," and a round of mechanical analysis of sentences, placing the *disjecta membra* of the mangled sentence in the rectangular schemes prepared for them. He was in favor of rational analysis, but said that these schemes were of no educational value, but quite the reverse, for the pupil must understand the *real* analysis before he could make any use of these mechanical and useless schemes. In the course of his remarks he gave some amusing glimpses of his own early life, and closed with a fine illustration of the imperial power of spmpathy and a telling appeal to those who were just stepping out into the great educational vineyard, to carry with them pure hearts and the magic of human kindness and sympathy. Dr. S. P. May also addressed the graduating class with special reference to the study of art in connection with the Mechanics' Institutes, and intimated that the Minister had under consideration a scheme for bringing these institutions to a higher state of efficiency through the medium of teachers trained at the Schoo of Art. It was hoped in this way to benefit the teachers both æsthetically and financially. There were two things which would have given greater *eclat* to the proceedings, the presence of the Minister of Education whose duties in the House prevented him from attending these exercises, and the presence of a larger audience, such as would gladly have attended had the proper publicity been given to the event. We hope this will be remedied on future occasions. The class just graduating has left a red line under its name by kindling a literary society within the sombre walls and cloister-like solemnity of the Normal School. It is to be hoped that their successors will keep the sacred light well trimmed and never allow it to die out.

STRATHROY HIGH SCHOOL.—The attendance at the Strathroy High School this week is 171, being the highest number ever recorded. The rooms are now overcrowded, and the trustees at their next meeting will have to arrange for the putting in of more seats, or enlarge the school building. The amount of fees already collected from pupils, is about $500. The excellent teaching staff engaged has had a tendency to bring pupils from far and near to the High School, and from present appearances we believe that both teachers and pupils will give a good account of themselves.—"*Strathroy Age,*" *Jan. 17th, 1884.*

The Principal of the Listowel Public Schools, Mr. Rothwell, is now a veteran teacher. He has served in Listowel about 20 years, and was never more popular.

With a view to making courses at the Normal Schools identical, Mr. McFaul and Mr. Whale will, we understand, prepare a detailed plan of the work to be done by the students during each session.

John McBride B. A., late headmaster of Port Rowan, high school succeeds Wm. McBride M. A., as headmaster of Richmond Hill high school.

Mr. W. R. Miller has resigned his position as headmaster of the Goderich Model School and has embarked in the insurance business. He is succeeded by Mr. Embury of Brockville.

Mr. Whale, late teacher of drawing in Brantford Collegiate Institute has been appointed Drawing Master in the Ottawa Normal School. He received his professional training in England and enters on his duties under favorable auspices.

An investigation was commenced yesterday at Barrie by Dr. Hodgins into the rumoured frauds in connection with the High school examinations, and the evidence clearly established the fact that candidates had been supplied with the questions previous to the examinations.—*Mail, Jan. 4th.*

At the Canadian Institute Feb. 2, Prof. G. P. Young spoke on the interpretation of imaginary quantities in mathematics. He showed that all imaginary quantities have a real interpretation and a real existence. It is pleasing to see the veteran professor returning to the love of his youth.

The attendance at the Public and High Schools of Napanee has increased so largely that additions to the teaching staff have been found necessary. A fourth teacher has been added to the High School staff, and in all likelihood the Public Schools will speedily obtain one or two additional teachers.

The teachers and pupils of the Normal and Model Schools, and a few friends, presented Miss Hunt with a purse containing $150. Miss Hunt was an efficient teacher and is held in high esteem by her pupils and fellow-teachers. She retires from the position of teacher of the third division of the Girls' Model School on account of failing health.

In the Provincial Model School at Toronto Miss Scott, of the Ottawa Ladies' College succeeds Mrs. Cullen as head mistress. Mrs. Cullen resigned on account of serious illness after twenty-two years' faithful service in the school. Mr. J. H. McFaul, late Inspector of St. Catherines' public schools, succeeds W. Armstrong, C.E., who has been Drawing Master in the Normal and Model Schools for over twenty-five years. Sergeant Parr also takes the place of Major Dearnally as Drill Instructor.

The Renfrew school has had several changes on its staff of teachers, some of them caused by the teachers receiving better offers elsewhere. The staff for 1884 will be:—High School, Messrs. McDowell and Kemp; Model School, Mr. Boag and Misses Mills, Mitchell and Smallfield; Separate School, Mr. Berry and Miss Morgan. The Board refused to allow Mr. Kemp to accept a higher salary in Pembroke, as his agreement was for a year, but Miss Reynolds left for Arnprior at an advance of $50.

Mr. J. H. McFaul, the Drawing Master lately appointed in the Toronto Normal School, has had over twenty years' experience in Canadian Schools. He received his training at the Toronto Normal School in 1866, and has held important positions as teacher in the public, high, and model schools respectively and has latterly been a public school inspector. He has all his life made a specialty of penmanship and drawing, and has undergone special training in drawing under eminent American and English professors.

From a recent report by Inspector Scarlett we learn that the average attendance for the Counties of Northumberland and Durham is 43% of the number on the roll. The Inspector says: "One great drawback in connection with the progress of primary education in this Province is irregularity of attendance.....The average cost per pupil, including local section and county tax is $5.70, while each criminal prosecuted in these united counties costs considerably more than fifteen times that amount....Too many of our schools are under the control of boys and girls accustomed to routine drill, who would do excellent work in the primary departments of a graded school under the supervision of a first-class teacher, but as yet have neither the maturity of mind, nor the professional experience to form habits of thought, and lay the foundation of character in our children....In very many ways the child mind is too often subjected to mere experiment. Too often any apprentice who "hires cheap" is permitted to operate. This is why I favor the employment of an experienced teacher in any school section in which circumstances are at all favorable."

The Council has granted funds to carry on the promotion examinations in answer to a petition from the Teachers' Association.

Rev. Ed. Blair, M.A., Inspector of schools in Grenville, while one of the oldest is yet one of the most active inspectors in Ontario. He retains his physical vigor to such an extent as to prefer to walk from school to school when performing his official duties. Mr. Blair was educated at St. Andrew's University in Scotland.

The experience of many teachers will no doubt enable them to corroberate more or less fully what the Superintendent of the Columbus schools says with reference to the children of rich parents. "The children most difficult to control come from well-to-do and wealthy families. They are not vicious, disrespectful, or impolite, but are indolent and averse to doing anything contrary to their own sweet wills. The reason is evident. So long as the teacher can disguise the work as play, all is well; but when it becomes plain, hard, and continuous work, and a little compulsion becomes necssary, trouble begins. Sometimes, in order to avoid trouble, teachers do the work for these pupils. The result in all such cases is the acquisition of some knowledge by the cramming process, but no increase in mental power. These pupils study only when under the eye of the teacher. This may do in the primary grades, but those pupils in the high and grammar grades should daily devote from one to two hours to uninterrupted study out of school. When children arrive at the age of twelve years they should have acquired a power of application and attention, have formed a habit of regular and systematic work, and have self-control enough to force themselves to the performance of unpleasant duties."

At the close of the Port Hope High School for the Christmas holidays the pupils presented Dr. Purslow, the head master, with an address filled with expressions of appreciation and good feeling towards him. It was accompanied with a library set of Vienna manufacture, consisting of six pieces in a handsome case. In the course of his reply Dr. Purslow said that it wanted only a month of being a quarter of a century since he first became connected with the school, that he looked back with the greatest pleasure to occasions like the present when he had received assurances of his pupils' esteem. These times were oases in the desert of hard and weary work which every conscientious teacher had to traverse. He went on to compliment the pupils on the good, healthy, moral tone that pervaded the school, and thought no school was more easily managed than this, and the secret was that he had confidence in them, and they had confidence in him and in each other. He had always found the heart of the school, as a whole, in the right place. He had to look for it sometimes under a big heap of mischief and fun, but there it was, beating warmly on the side of truth and right, as many a test had shown. He again thanked them for this expression of their confidence and good-will, and reciprocated with all his heart their good wishes for his future happiness and welfare.

The Bruce *Telescope* says:—"It is really time that teachers should also establish a trade union. At present they are entirely at the mercy of their employers, the school trustees. The wages of teachers are coming down. They will come down still lower unless steps are instantly taken to arrest the down slide. The seventy-five mills that are manufacturing teachers since 1874 have produced a plethora. The supply should be checked in some way. The engagement of teachers for schools should be regulated upon a different system from that at present adopted. It is unseemly and disgraceful to see the way teachers will degrade themselves by applying for schools advertised in the newspapers. There is no country, at present, in the world in which such a system is adopted. Take up the American newspapers. Will any one see teachers advertised for in the same shameless manner as it is done in Canada? A council employed by a union of teachers would correct this and other abuses. The modest and friendless teacher would get a chance. The pushing, the turbulent, the pretentious and the scheming, would not have it all their own way. It behoves teachers who intend to make teaching a business for life to unite for the protection of a noble profession. It is now very low. Thirty-one thousand men and women have certificates—only about eight thousand can get employment. Five-sixths of the public schools of the country are conducted by boys and girls without experience. The result is that eighty per cent. of the school-going population leave school without aspiring even to go as far as the Fourth Book. The last report of the Minister of Education shows these results. Teachers, raise the standard of education—raise your status by uniting into a trade union.

THREE SCENES IN BROCKVILLE.

Scene I.—An ex-Inspector selling tickets for a lottery to dispose of his own homestead.

Scene II.—Ex-Inspector paying down cheerfully the fine for violation of the statute.

Scene III.—The drawing. The Ex. strikes the luck, wins back his home, pockets the spoils. The curtain falls to the tune of "Yankee Doodle." Immense sensation.

The Legislative Committee of the Ontario Teachers' Association had a conference with the Minister of Education Jan. 11th. The following members of the committee were present :—Messrs. James L. Hughes, chairman ; Wm. Carlyle and Wm. McIntosh, inspectors ; H. B. Spotton, M.A., L. E. Embree, M.A., and A. McMurchy, M.A., High School masters, and S. McAllister and R. W. Doan, Public School masters. Among the questions discussed were :—1. Improvement in Model Schools. 2. Third-class teachers' certificates and permits. 3. Remuneration of examiners at High School entrance examinations. 4. Propriety of High School masters presiding at High School examinations. 5. Propriety of the same examiner preparing the papers on the same subject for all the departmental examinations during the current year. 6. Public School inspectors' certificates. 7. Success in teaching an element in awarding the grade of certificates. 8. A knowledge of science imperative in case of second-class certificate. 9. Fees for candidates at Public school teachers' examinations. 10. Increased efficiency in training of Normal schools. 11. New programme, 1882. 12. Teachers' associations. 13. One year's notice to be given of changes in the school programme. 14. High School fees. 15. English history text-books. 16. Bible reading in schools. 17. One series of readers. 18. Suggestions regarding entrance examinations. 19. Professional training for High School teachers. 20. Superannuation of teachers. 21. The advisability of abolishing the intermediate examination. 22. The propriety of conducting third-class examinations by County Boards, as formerly, and fees of examiners in case the old plan is adopted. 23. Should candidates be allowed to write for second-class certificates without previously obtaining third-class certificates? 24. Relative value of subjects at second-class examinations. With regard to Bible-reading in schools and 21, 22, and 23 of the questions discussed the Minister expressed his intention of taking immediate action. As to the Bible-reading, it is proposed that passages be selected, one for each day in the year, and that a circular containing these be sent to each teacher in the province.

The Committee appointed by the Board of Education at Gananoque in Dec. last to examine the two authorized series of readers, reported as follows :—*To the Board of Education, Gananoque.*

Gentlemen,—Your Committee appointed to examine the two sets of readers authorized by the Government, beg to report as follows :—

1. The type of the Candian series is larger and clearer than that of the Royal. This difference is very noticeable in the Primers. In these latter there is also a difference in the illustrations, those in the Canadian series being more suitable for elementary instruction than those in the other series.

2. The Canadian series contains in the Primers a number of words and sentences in script which have already occurred in the preceding lessons for the pupils to imitate with slate and pencil. This appears to your Committee to be more practically useful than the imitation of the printed characters which are given for a similar purpose in the Royal series.

3. From the second to the fifth of the Canadian series the lessons are printed with spaces to indicate the rhetorical pauses. This is a feature not found in the Royal series.

4. Both series contain biographical sketches of authors, which are short but sufficiently long for the purpose intended.

5. The notes attached to the lessons in the Canadian series are fuller and more appropriate to school work than those in the Royal series. Further, the questions in the Canadian series can be answered from the lessons themseves, which is not always the case with the other series.

6. As a collection of literary selections the Royal series is decidedly superior, but with the accompanying drawback that the lessons are too long and the books too large for the time which pupils are expected to spend over them. Also the selections seem too difficult, in many cases, for the positions that they occupy in the series.

7. Both series contain passages which are not the finest examples of elegant English, but these are few, and in both may be found a sufficient number of masterpieces to cultivate the taste as far as the cultivation of a literary taste is possible in Public Schools.

8. The following points are noticeable in the Canadian series which are not found in the Royal: (a) The most difficult words in each lesson are defined in the 2nd, 3rd, 4th and 5th books. (b) Directions for composition based on the subject matter of the lessons. (c) Lists of prefixes and affixes, Latin roots, and a view of the foreign elements in English. (d) A list of words often incorrectly pronounced showing the correct pronunciation and the most common error. (e) Rules for reading in general in the Sixth Book and hints attached to the majority of the lessons throughout the series, for the purpose of aiding pupils in reading the same. (f) Many of the lessons are summarized.

9. As far as can be learned, the Canadian series is cheaper than the Royal, but not so much as might be expected from the comparatively small size of the books.

After carefully considering these points obtained by a thorough examination of the books, your Committee beg to state that it is their decided opinion that the Canadian Series of Readers is better adapted to the wants of the Gananoque Schools than the Royal.

All which is respectfully submitted,

W. K. T. SMELLIE, B.A., H.M., H.S.
WM. SCOTT, B.A., A.M., H.S.
S. G. COOK, P.P.S.

On motion the report was received and placed on file without further action at present.—*Gananoque Reporter, Dec. 8, 1883.*

NOVA SCOTIA.

The *Acadian Science Club* is a recently formed organization aiming to awaken and foster an interest in scientific knowledge and to keep its members abreast of the scientific progress of the times. Its sucess so far has been quite marked. It publishes an excellent monthly, the *Acadian Scientist*, edited by Mr. A. J. Pines, the enthusiastic and accomplished secretary of the Club. The following is a complete list of the officers :

OFFICERS :

President—A. E. Coldwell, A.M., Instructor in Natural Science, Acadia College, Wolfville, N.S.

Directors :

Physiology—C. W. Roscoe, A.M., Inspector of Schools, Wolfville, N.S.

Geology—Alexander McKay, Esq., Supervisor of Halifax City Schools, Dartmouth, N.S.

Botany—A. H. McKay, A.B., B.Sc., Principal Pictou Academy, Pictou, N.S.

Astronomy—Prof. A. E. Coldwell, A.M., Wolfville, N.S.

Chemistry—J. F. Godfrey, Esq., Wolfville, N.S.

Zoology—A. J. Pineo, A.B., Principal Wolfville High School, Wolfville, N.S.

Entomology—J. E. White, M.B., Toronto, Ont.

Mineralogy—S. K. Hitchings, B.Sc., State Assayer and Principal High School, Biddeford, Maine.,

Natural Philosophy—Prof. F. H. Eaton, A.M., Provincial Normal School, Truro.

A. J. Denton, A.B., Halifax, N.S. ; W. P. Shaffner, A.B., Kentville, N.S. ; W. W. Saunders, Esq., Bridgetown, N. S., F. H. Schofill, A.B., Winnipeg, Manitoba.

Dr. Rand has entered upon his duties as Professor of History and Education in Acadia College.

Supervisor McKay (Halifax City) has recovered from a serious illness by which he was prostrated shortly after the beginning of the Christmas vacation.

Pictou Academy has an attendance of 170 students. Its staff now numbers four Provincial Grade A teachers, two of whom are also University Graduates. The Pictou "boys" met with their usual success at the various Matriculation examinations last autumn.

The Halifax City Council has adopted a resolution requesting the Council of Public Instruction to rescind the minute authorizing the Halifax Board of School Commissioners to establish separate schools for colored children, and (virtually) empowering them to exclude the latter from the ordinary schools. The resolution also also asks the Commissioners to suspend action under the minute and to give colored children the same privileges as are accorded those of white citizens. It is not probable that the Council of Public Instruction will take action in the matter until the Commissioners, who are now considering the question, shall have announced their decision, The minute of council, whose abrogation is sought, is purely permissive, and was originally adopted in response to a petition from the colored citizens themselves.

Mr. G. W. Dill has resigned the Principalship of the County Academy, Kentville.

The appointment of Mr. Crockett to the Chief Superintendency of Education in New Brunswick is regarded with general approval by the teachers of Nova Scotia, to many of whom Mr. Crockett is known as an Educationist of exceptionally high attainments.

Readings and Recitations.

THE BOY'S COMPLAINT.

Here are questions in physics and grammar
That would puzzle you somewhat, I know;
Can you tell what is meant by inertia?
Can you clearly define rain and snow?

Do you know there's a valve in the bellows?
Can you tell why your clock is too slow?
Why the pendulum needs looking after?
Perhaps it is swinging too low.

"They was going up town in the evening;"
Do you call that bad grammar, I say?
I'm sure Mary Jones and her mother
Say worse things than that every day.

But I s'pose "was" should be in the plural,
To agree with its old subject "they,"
According to rule,—my! I've lost it,
There's two per cent. gone right away,

And now, only look at the parsing,
And it will surely take in every rule,
And, down at the end, more false syntax,
With authorities given "in full."

Arithmetic? my! how I hate it;
I'm stupid at that in the class;
So, how in the name of creation,
Can I be expected to pass?

Here's a ten-acre lot to be fenced in,
Here is a duty to find on some tea,
Here's a problem in old alligation,
And a monstrous square-root one I see.

Can you tell who defeated the Indians?
Do you know who was killed in a duel?
Do you know what the first tax was raised on?
And how some just thought it was cruel?

Perhaps I may pass on an av'rage;
If three-fourths are right I'll get through;
But my teacher calls such things shabby,
So what is a poor boy to do?

SPEAKING TO THE POINT.

[An addition having been made to the jail in Paterson, New Jersey, at a cost of $30,000, the county officers and contractor celebrated the event by a banquet in the building. There were liquors in great abundance. After a number of toasts had been drunk, the gentleman presiding, a judge, proposed "the temperance cause." It was probably done because they were getting pretty drunk. Mr. Bantram, a temperance man, was called on to respond, and did so in the following stinging speech:]

"I thank you for this invitation, and I recognize its fitness. You have assembled to celebrate the enlargement of this jail, *rendered necessary by the use of strong drink*, in which you are so freely indulging this day. Down stairs the cells and corridors are crowded with criminals who have but changed places. A few years ago they were respected citizens, some of them occupying as responsible positions as those now occupied by yourselves; but they commenced *as you have commenced*, and they continued as many of *you are continuing*, and to-day they are reaping the harvest in a career of crime, and paying the penalty with a period of punishment. I hear the popping of corks. I listen to the merry voices, and the praises you are singing to the infernal spirit of wine; but there comes to me the refrain from the prisoner's cell, where a man is shedding penitential tears over his folly, accompanied by the still sadder wail of anguish uttered by the broken-hearted wife, worse than widowed through the traffic in strong drink, which, as a judge in your courts said, 'is the great promoter of crime,' a traffic licensed by your votes, and sustained by the patronage you are this day giving it. It is with inexpressible sadness that I discover that there can be found in Passaic county so many men with hearts so hardened, feelings so calloused, sensibilities so blunted, that in a place like this, under circumstances like these, they dare raise to their lips that which depraves the citizen, and endangers the state. Thanking you, gentlemen, for this unexpected privilege, I take my seat, fully conscious that you will never again call on me under similar circumstances."

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

RENFREW.—Mr. Alford, the President, chose for the subject of his address, "The Discontent of Teachers," which arose, he thought, not from the worry of the work itself, but from the petty fault-finding of those who knew least about school matters, and from the poor salaries which teachers in general receive. He advocated the establishment of a Union, in which all should bind themselves not to teach for anything below a certain sum. Many teachers could not take the position which belonged to them and was open to them in the social ranks for want of money and fear of debt.——This matter was discussed at intervals during the Association, and the general idea seemed to be that the remedy rested with the teachers themselves, when they should cease to underbid one another. Mr. Raine, Principal of the Renfrew Model School, conducted a class in Fourth Book Literature, the selection being "The Burning of Moscow." The lesson was taken up in a conversational style. Mr. Campbell, of Arnprior, made a few remarks, and thought it was well to have the lesson read before taking up its literature. Mr. Kennedy, agent for Gage's Canadian Readers, spoke on the Reader question. He proceeded in a humorous and satirical style, drawing comparisons between the series in which he is interested and the Royal Readers. A committee was afterwards named, consisting of Messrs. Alford, Raine, Pounder and Dunn, and Misses Mitchell, Smallfield and Morgan, to look into the merits of the two series, and report next day. At the Arnprior meeting in May, Mr. W. B. C. Barclay gave notice of a motion to be introduced to fix the place for the holding of the Association meetings permanently at Renfrew, as they were always best attended there. In Mr. Barclay's absence, on Friday morning, Prof. Dawson made the motion and it was carried unanimously. Mr. Campbell suggested that the next meeting should be of an "Institute" character,—the teachers to form into classes and be questioned on selected subjects, as if they were pupils themselves. All were getting tired of the slow ways of the association, and wanted a change. Messrs. Raine and Dawson spoke in support of the idea, which was received with general favor. The teachers of the Renfrew schools were appointed a Committee of Management. The Reader Committee reported. They commended the literary excellence of the Royal Readers, but placed Gage's Canadian ahead of them for use in school-work. Mr. Odlum, headmaster of the Pembroke High School, on the subject of "Teaching Reading," laid particular stress on Articulation and Expression, and gave illustrations. The Secretary of the Association, Mr. A. D. Campbell, of Arnprior, for his efficient services extending over a period of two years and a half was voted the sum of $25; and a resolution was passed to hereafter pay the Secretary $10 a year. Mr. Corbett, of the Pembroke High School, then treated the subject of "Deductions Made Easy." He advocated synthetic solutions for beginners, with hints from the teacher: and then analytic, when harder problems were to be taken up. Mr. McDowell said that in his experience the synthetic was the method by which most deductions could be solved. In the afternoon, Mr. McDowell spoke on "Our Schools." His remarks were brief, yet they touched on many important points, and were the subject of considerable discussion. Of High Schools, he thought there should only be one in each county; he did not mean that there were too many teachers; but if all were gathered on one staff, work would be done much better. The present system of Model Schools was wrong,—it was an injury to the pupils. The Public and Model schools should be separate; or a separate room and additional teacher provided. The Model School training, however, was good. School Boards should engage teachers not for one year but for a term of years,—for good conduct or till their usefulness was gone. Mr. Raine agreed with Mr. McDowell that a grouping of teachers in one place would make High Schools more efficient. Teachers could not better their positions so long as Inspectors granted permits. Inspectors should not have the power to grant permits because the people were too stingy to pay decent teachers. Mr. Odlum said that though some system of protection was needed in the matter of salaries, a County Union would be useless. Outsiders would underbid. Inspectors were powerless; for he believed some Boards would do without the grant or shut up the school rather than pay above a certain sum. Nothing can be done, unless there is legislation fixing a minimum rate. Teachers, however, could do some good for future generations of the profession by inculcating a spirit of liberality in the matter on the pupils of to-day. Prof. Dawson thought here should be a multiplicity of High Schools. It was not fair to make outside folks hewers of wood and drawers of water for favored or central sections. Teachers should cultivate an *ésprit de corps*, and frown down upon any teacher underbidding another. Mr. Odlum, by request, read a couple of selections from one of the school books. He read with so much expression and impressiveness as to make some of his hearers sympathetically shudder during his rendering of portions of "Edinburgh after Flodden. Votes of thanks were given to

all who had contributed to the programme; and in closing the teachers' meeting, Mr. Alford thought that none of them would miss the small expenses out of their small salaries. Mr. A. A. Wright then addressed the Assembly, preparatory to presenting the High School Intermediate Medals to the successful candidates. As an old teacher himself, he gave some good advice as to the self-improvement of teachers while following their profession, and hoped to see the medallists and many of the other teachers return to the Renfrew High School to prepare for higher certificates. As for the winners of the medals, they had secured them by fair and honest work, and he was only sorry that the presentation was not made more publicly. The School Board considering the medallists "our children," would always take a hearty interest in their welfare, and would help them to secure the best situations. He was able to announce an addition to the medals, Mr. D. Barr having decided to offer a gold medal to the first pupil of the Renfrew High School taking a first-class certificate. He then proceeded to present to Miss Jennie Wallace his own medal for General Proficiency; to Miss Minnie Gourlay, Mr. James Carswell's medal for French; and to Mr. Tinswood Burton, Mr. A. Barnet's medal for Mathematics. He drew attention to the large percentage made by Mr. Burton,—96 per cent. in Arithmetic; 78 in Euclid; and 72 in Algebra. He also mentioned that as yet, in three years, no Renfrew Village pupil had won any of the medals. Mr. Alford said Mr. Wright spoke as only an old teacher could speak; and he was glad to say Pembroke was following in Renfrew's wake, and now had two medals to offer—one for the Entrance and one for the Intermediate. Mr. Wright said that the four medals would of course continue to be an annual feature in connection with the Renfrew High School. The meeting then dispersed.

HALDIMAND.—The regular semi-annual meeting was held in the Public School, Cayuga, on the 9th and 10th November, 1883. After the reading of the minutes Mr. William Egbert, Principal of Dunnville Public School, was unanimously chosen President, in room of A. Nugent, B.A., who had left the county. Notice of motion was made by J. A. Murphy, "That in the opinion of the teachers of Haldimand, it is inexpedient, at the present time, to abolish the office of Minister of Education and substitute therefor the office of Superintendent of Education." This motion was subsequently carried after some discussion. "How to make Teachers' Association more useful" was then introduced by the County Inspector in a very able way. He suggested "that (1) the schools where the association was held should go on as usual for a half day and the whole association should be present, and criticise the good and bad features of what they saw, afterward; (2) that the teachers form themselves into a class in order to illustrate practically the teaching of some subject; (3) to have critics appointed to deal with the subjects as taken up; (4) that they read certain works between each meeting and have the said work criticised by the association or certain members thereof; (5) that the teachers give criticisms of schools visited; (6) and the inspector do likewise; (7) that there should be a greater and more regular attendance of teachers; (8) who should take an active part in the work, and (9) that parents and trustees should be present in larger numbers, and (10) that teachers name some subject for discussion at subsequent meetings. Messrs. Hume, Cheswright, Moran, Elliot, Egbert and Grier took an active part in discussing this paper. We regret that our space prevents a more extended notice of most of these papers. The Vice-President, Miss Hiseler, then gave the opening address, in the absence of the President, Mr. Nugent, whom she complimented highly and deservedly, and then went on to speak of the high calling of the teacher, and the advancement made in the methods of teaching within a few years. She threw out valuable hints as regards school government and school-room education, and concluded by enumerating the advantages of the "Promotion Examinations" and the success of their introduction. Mr. J. Murphy, Principal of the Cayuga Public School, then taught a class in literature, and his manner of teaching was discussed by Messrs. Cheswright, Elliot, Moses, and Miss Harrison. Mr. J. Elliot, of Caledonia High School, followed with a valuable and interesting paper on "Common errors in Pronunciation." He referred to the difficulties of English pronunciation, and drew his illustrations from common mistakes made in ordinary conversation. He concluded by giving a list of miscellaneous words commonly mispronounced. The convention adjourned to meet again in the Court House, where a musical and literary entertainment was given in the evening, which was very largely attended by the members of the Convention and prominent citizens from different parts of the county. The programme was an extensive one, and consisted of choruses, songs, recitations, and readings, and judging from the frequent encores elicited from the audience, it was a decided success, every one seemingly having departed well satisfied. Among those who particularly pleased the audience were Messrs. R. Haddow, B.A., R. M. Hamilton, and McEachren, Mrs. Mitchell, Miss Bella Brown, Miss Isa Black, and Miss Flowers. The chief point of interest, however, to the large audience present was the presentation to the popular and indefatigable County Inspector, Mr. Moses, of a beautiful gold watch, chain and seal, by the teachers of the county, as a slight token of their appreciation of his services. The watch bore suitable inscription, and was procured at the jewellery establishment of D. M. Turnbull, Caledonia, and reflects greatly to the credit of that gentleman and the stock carried by him. The chairman, J. Baxter, Esq., M.P.P., called on Mr. J. H. Elliot, the secretary of the Committee, to read the address, Miss Hiseler, Vice-President, presenting the watch at the proper time.

ADDRESS.

Clarke Moses, Esq., Public School Inspector, County of Haldimand:—

DEAR SIR,—We, the teachers of the County of Haldimand here assembled, take this opportunity of expressing to you the very high esteem in which we have held you, both in your official capacity as School Inspector as well as in that of a private friend to each and all of us. We fully recognize the arduous nature of your office—the tact, skill, patience, experience and labor requisite for successfully fighting against ignorance and prejudice, and at the same time utilizing to the utmost the knowledge and enterprise of the community at large in carrying out your measures for the well-being and advancement of the rising generation—aptly termed the "trustees of prosperity." We feel sure, too, from the manner in which your efforts in the past have been seconded by the people, that you have the esteem, good will and support of all the intelligent citizens in the county. We assure you, also, that the wise and kindly advice privately extended to us from time to time has been received in the spirit in which it was offered, and has tended not a little to lighten our labors, and render our efforts more beneficial to the young. Nor must we forget, also, to tender our most cordial thanks to Mrs. Moses for her courtesy and hospitality so willingly extended to us whenever opportunity offered. While congratulating you on the present prosperous and efficient state of the schools in the county, the merit of which is so largely due to yourself, and as a slight token of our appreciation of yourself and your efforts in our behalf, we beg your acceptance of this gold watch and chain; and although we know that this time-piece must of necessity mark for you many laborious hours, still we sincerely hope it may record them as happy and prosperous ones also, and that your hand and brain may long be spared to advance the educational interests of this country.

Signed on behalf of the association, by

A. NUGENT, B.A.,
L. G. MORGAN, B.A.,
WM. EGBERT,
J. H. ELLIOT,
J. G. CARRUTHERS.

In reply to the Teachers' address, Mr. Moses spoke very feelingly and appropriately. He felt keenly the compliments paid him by the teachers, and was glad if his efforts to lighten their labors was in a measure successful, at the same time he thought a great part of his success was due to the wise and active course pursued by his predecessor, Mr. Harcourt, who had opened the way for him to follow. Any advice or assistance he had given without the hope of reward, beyond what the conscientious discharge of duty would bring. He thanked them most cordially for the sentiments contained in the address and for the beautiful gift that accompanied it, and referred among other things to the willingness of the people generally to carry out any suggestion in their power for the advancement of education. On Saturday morning, Mr. Cheswright took up the subject of fractions, so perplexing to young minds, and showed clearly how it could be made interesting and plain to them. It should be taught objectively by taking, for instance, an apple and cutting it in halves and quarters, and asking the children the names of these pieces, etc. Let them do the work and always think they were doing it themselves. There was a tendency to abolish all rules, and make the pupil deduce the rule, but this could only be done to a limited extent. Altogether the lesson was one of the best delivered in the county for a long time.

The Reader question was next taken up. Twenty-five minutes were allowed the agents of the different series of authorized Readers to address the Association, after which Mr. L. A. Kennedy, B.A., secretary of the committee appointed by the County Council, read the following report which was unanimously adopted by the association:

To the Teachers and Trustees of the County of Haldimand:—

We, the committee appointed by the Municipal Council of the county of Haldimand, for the purpose of examining the authorized series of school Readers with a view to having a uniform and the best series adopted for use in the public schools of the county of Haldimand, beg to report: That we have examined the authorized series; that we unanimously recommend the adoption of the Canadian Readers for the following reasons:—1st. They are better graded than either of the other series; 2nd. The Primers are better suited to beginners; 3rd. The type and illustrations are decidedly better; 4th. The notes are more conveniently arranged; 5th. Grammatical exercises and rhetorical pauses

are suitably introduced ; 6th. They are the best series for the teaching of reading. All of which is respectfully submitted.

W. J. BURNS, M.D., *Chairman.*
L. A. KENNEDY, B.A., *Secretary.*
J. G. CARRUTHERS.
WM. EGBERT.
CHAS. STEVENS.
A. A. DAVIS.
DR. LANGRILL.
C. MOSES.
JOS. C. MANUEL.

Mr. Morgan took up the subject of the "Relation of Trustees and Parents to the School," and showed how one-half the teaching power was wasted, because the trustees and parents threw nearly the whole burden on the teachers, did not visit either the school or the teacher; in the majority of cases, had no personal acquaintance with him, and only got a one-sided exaggerated idea of what was going on in the school, and made other suggestions of a practical nature. Mr. L. A. Kennedy, M. A., Principal Caledonia High School, gave a very practical lesson on "How to Teach Reading." He gave illustrations of good and bad reading, which showed him well skilled in the art. His remarks were greeted with well deserved applause. A committee was then appointed to carry out a programme for the next meeting of the association, which will be held in Dunnville, due notice of which will be given. The committee consisted of Messrs. Kennedy, Moses, Hume, Carruthers, Alexander, Miss Davidson and Miss Flowers. Votes of thanks were rendered to the different parties who had read papers, delivered addresses, or taken part in the entertainment in the evening. The association adjourned after singing the National Anthem.

REVIEWS.

VOICES FOR THE SPEECHLESS, SELECTIONS FOR SCHOOLS AND PRIVATE READING, by Abraham Frith, Secretary of the American Humane Association—which "plead the cause of those dumb mouths that have no speech." *Boston: Houghton, Mifflin & Co. New York: 11 East Seventeenth Street.* Under this title have been gathered from a great variety of sources poems and prose passages in which kindness to all animals is inculcated. Indeed, the book grew out of the public sentiment which formed the Society for the Prevention of Cruelty to Animals, which is one of the characteristic features of modern civilization. Many of the extracts of this book are from writers of the highest rank, and all of them are not only worth reading for the humane sentiments which they express, but for the excellence of their style. The book is admirably adapted for occasional use in schools, and also for Sunday Schools, to interest children in dumb animals, and to excite in them that sympathy and care which all should feel for our "inarticulate brethren." The book (a 16mo) contains 256 pages, printed from good type, on good paper, and neatly bound in cloth. The "Contents by Titles"; the "Index of Subjects and Titles" (alphabetical), and the Index of Authors" (alphabetical), add much to the usefulness of the book, and enable it to be studied in a variety of ways. Price 75 cents. Special terms will be made with Schools, Sunday Schools, and Bands of Mercy.

WORDS AND THEIR USES.—Past and Present. A study of the English Language. By Richard Grant White, New Edition. EVERY-DAY ENGLISH.—A sequel to Words and their Uses. By Richard Grant White. Each vol. crown 8vo. $2.00. *Houghton, Mifflin & Co. Boston.* These are two of the best books on practical English that have ever been published, and we add two of the most interesting. We sincerely trust that they will soon be found in the hands of every teacher and student of English in Ontario. There has been in this Province wherever the English Language is spoken, too great a devotion to formal grammar. Boys and girls for a generation or more have been so worried with parsing and analysis that the study of the English language has come to be regarded with actual repulsion. Mechanical "forms for analysis," and multiplied "formulæ for parsing," have been studied and used to the complete bewilderment of tens of thousands of English speaking youths, in the vain hope of learning to "speak and write the English language with propriety," and rare indeed are the instances in which this desirable end has been attained. Perhaps but few teachers will fully agree with Mr. White in his opinions as to the "Grammarless Tongue," but all will agree as to the real usefulness of the work he has done for the English language and for those who study and teach it. These books are not dry and unattractive, nothing indeed, that comes out of Mr. White's hands can be so characterized on the contrary they are written, in an exceedingly attractive style, and will prove to most of our teachers and students, more interesting than a novel.

THE RIVERSIDE SHAKESPEARE.—The complete works of William Shakespeare. Riverside Edition. Edited by Richard Grant White. With Glossarial, Historical, and Explanatory Notes. In three volumes, . Comedies, II. Histories and Poems, III. Tragedies, with Portrait Crown 8vo, gilt top, the set, $7.50 ; half calf $15.00. Also the same in 6 vols. 8vo, printed on heavier paper, and beautifully bound ; the set, cloth, in box $15 ; half calf $30 ; *Houghton, Mifflin & Co, Boston.* This is an entirely new edition of Shakespeare's Complete Works, and "combines the most authentic and carefully corrected text with foot-notes embodying in compact form the results of thorough study of the Elizabethian period and its drama. Mr. White's great reputation as a critic, and as a student of the English language and its literature guarantee the excellence of this Edition of the great dramatist. As for the workmanship, the publishers have succeeded in producing one of the handsomest editions ever published. Every private and School Library should have Richard Grant White's Edition of Shakespeare.

———o———

Wit is a magnet to find wit, and character to find character.—*Emerson*

Ah! have you yet to learn that the eye altering alters all; "that the world is an echo which returns to each of us what we say?"

Don't waste life in doubts and fears; spend yourself on the work before you, well assured that the right performance of this hour's duties will be the best preparation for the hours of age that follow it.—*Emerson.*

A wise man in our time caused to be written on his tomb, "Think on living." That inscription describes a progress in opinion. Cease from this ante-dating of your experience. Sufficient to-day are the duties of to-day—*Emerson.*

Dr. Arnold, writing to one of his old pupils who had commenced the work of tuition, said, "You need not think that your own reading will now have no object because you are engaged with young boys. Every improvement of your own powers and knowledge tells immediately upon them, and, indeed, I hold that a man is only fit to teach so long as he is himself learning daily."

The law of the association of ideas is, as yet, as far from accomplishing those beneficent ends for which the Creator implanted it in the human mind, as steam was on the day when the Marquis of Worcester caught the idea of its power, from seeing it throw off the lid of a tea-kettle, and before Savery, Newcomen, Watt and Fulton, made it dig coal, weave cloth, grind corn, and bring all nations and continents into one small neighborhood. —*Horace Mann.*

The Survival of the Unfittest finds an example in those schools which are yet teaching permutations, progressions, circulating decimals, insurance, annuities, compound interest, English money, and the like, in arithmetic. Similar unpractical topics waste the pupils' time in other subjects. The amount of live practical matter at hand is so great that there is no excuse, except ignorance, for using such dead matter.—*Minn. Journal of Education.*

"To be intellectual, to write books, to do wonders in mental pyrotechny is not the chief end of man, nor can we make it so. This is, indeed, what we seem to be aiming at, but we shall fail; Nature will prove too strong for us here; and, if we persist, she will just smash us up, and replace us with a people not so tormentedly smart. It is to the weak, not the brilliant, that the possession of the earth is promised." We quote the above from the *Canada School Journal*, but it is not bad reading for this latitude. Young teachers, especially, are apt to forget that the moral is more than the intellectual; that to be honest is deserving of more praise than to be brilliant; and that the pure in heart, not the keen in mind, shall see God.—*New England Journal of Education*

The time is past when a teacher can be carried along on the merit of his past success. It is as necessary that a teacher should constantly add to his store of knowledge and improve his methods in order to be a success in the work, as it is to change the water in a tank to keep it pure and fresh.

If a cask be filled with water and left for a time without adding a fresh supply, it will soon become stagnant and unfit for use. So it is with the teacher. He may be ever so well educated, and have good success for a time; but if he neglects to study and holds himself aloft from others of his profession, he will soon become like the water in the cask—unfit for use. Pebbles become polished and brightened by contact with each other; so do teachers. Teachers that attend institutes, take educational journals and are workers in the teachers' associations, are above comparison with those stagnant pools which are never refreshed; and school boards should take this in consideration when engaging builders to lay the foundation upon which their children are to build for life.—*The Moderator.*

IMPORTANT

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Table of Contents.

	PAGE.
EDITORIAL :—	
Report of the Minister of Education	49
Reports of the High School Inspectors	50
Moral Education	50
Notes	50
Reports of Cases	52
MATHEMATICAL DEPARTMENT	53
CORRESPONDENCE	55
SPECIAL ARTICLES :—	
Notes of Talks on Teaching	56
The Teaching Profession	57
New Methods	58
Duty	59
The Public School System of Ontario	60
EXAMINATION PAPERS :—	
Admission to High Schools, December, 1883	61
PRACTICAL DEPARTMENT :—	
Pedagogics	63
Elementary Teaching	65
Six Defects in our Schools	65
Science Teaching in Training Colleges	65
Teachers; their Qualifications and Duties	66
Programme for Township Institutes	66
Teachers' Institutes	67
The Effects of Alcoholic Drinks, Narcotics, etc.	67
NOTES AND NEWS :—	
Ontario	68
Nova Scotia	69
General	69
READINGS AND RECITATIONS	71
REVIEWS	72
MAGAZINES	72

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CANADA SCHOOL JOURNAL HAS RECEIVED

An Honorable Mention at Paris Exhibition, 1878.
Recommended by the Minister of Education for Ontario.
Recommended by the Council of Public Instruction, Quebec.
Recommended by Chief Superintendent of Education, New Brunswick.
Recommended by Chief Superintendent of Education, Nova Scotia.
Recommended by Chief Superintendent of Education, British Columbia.
Recommended by Chief Superintendent of Education, Manitoba.

The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

REPORT OF THE MINISTER OF EDUCATION.

The report for 1883 appears just as this issue is made up. We are therefore unable at present to do more than give a brief summary of its contents.

The first point we notice is a decrease of 407 in the total public school population, leaving 483,817 of school age. Of these, 457,178 have attended school during some portion of the year. The average attendance was 45 per cent. of those on the roll, which is, compared with other countries, a very respectable result. We believe that the average attendance does not reach fifty per cent. in any country, but have not the exact figures at hand. For the work of teaching these 483,817 children we have 5,203 schools and 6,857 teachers. The total expenditure on the public schools was $3,026,974 for the year, an increase of $182,702 over the previous year. But from this we must deduct $341,918, fixed capital, spent on sites and buildings, leaving $2,685,056 as the working expenses for the year. The average cost per pupil for the year was $6.42, probably many times less than the cost of prosecuting each criminal convicted during the same period.

The Legislative grant to the public schools was $251,356, and $14,382 to the separate schools, showing a total increase of $7,441.

As the teacher really makes the school, and salaries roughly measure the efficiency of teachers on the whole, it is interesting to note the average salaries of teachers in the province. For cities it stands at $742 for men and $331 for women; in towns $576 and $273; $385 and $248, respectively, in rural districts. The highest salary paid in 1882 to city teachers was $1,100 and the lowest to men $400; in towns $1,000 and $240; in counties $900 and $120. We find that the number of women employed as teachers is 3,795, an increase of 235, while there is a decrease of 300 men, leaving 3,062, or a minority of the whole to the extent of 733. Perhaps this is not an unmixed evil, for many of our best teachers are ladies, but to us it indicates a tendency to pay the lowest salaries and is not a good omen for the stability of the profession at large, for we can scarcely suppose that half these 3,795 ladies will remain without engagements of a closer character and that within ten years they will not hold certificates entitling them to preside elsewhere than in the school-room. If the province could be persuaded to spend $50,000 on teachers' residences, perhaps we should be able to retain many of these skilful ladies in the service. At any rate many of the annual changes would be obviated and many of the 3,062 men who will soon leave the work, would marry and settle down to teaching for a far longer period. The lack of a comfortable house attached to the school is at the bottom of very many of the pernicious changes which give the teachers so much the character of itinerants. With a convenient dwelling many a man would be content to become a permanent resident of the place, who is now tempted to seek in some other employment the means of establishing a settled home. It is a great annual loss to the educational interests of the country to have experienced men continually leaving the ranks, and $50,000 could not be more profitably spent. Even if one half the money were supplied directly by the government, we should save more than that amount by retaining skilled teaching power in the public service.

In the matter of school buildings steady progress is apparent. We spent $341,918 for this purpose, being an increase of $61,458 for the year. Handsome and well-equipped school houses are rising rapidly all over the country and we earnestly hope that during the next decade teachers' homes equally commodious and beautiful will nestle beside them. Teaching in the meantime will not become the life-work of the majority of men who are now teachers.

Looking at the percentage in the several classes, we find more than half of those at school in the first and the second class,—58 per cent.,—and one quarter in the third class. The figures are first class 35, second class 23, third class 25, fourth class 15, fifth class 2, and sixth class 22-hundredths per cent. of the whole number of pupils attending school. In all measures of educational reform it will be important to bear these proportions in mind. We must continually remember that the junior classes are more than one half of the whole number at school. In the preparation of programmes, the training of teachers, the work undertaken at conventions, etc., this fact should be firmly grasped, and thoroughly realized. If it be true, as constantly alleged by high educational authorities, that the best teaching talent should be employed upon these junior classes—and we endorse the statement—we can see the magnitude of the work that still lies before our Model and Normal Schools, and understand how much they need every encouragement and every stimulus, both moral and financial. At present we have only 1873 teachers who have been trained at the Normal Schools.

In the high schools as well as the public schools, there was a slight decrease in the attendance, viz., 663, leaving the total number of pupils 12,473. The average cost per pupil for the 104 schools was $27.56. It seems there are yet 51 union high and public schools in existence, and that only 37 high schools charge fees, while the other 67 are free.

It is impossible within the compass of a brief article even to glance over the whole report. We conclude the present notice with a pleasing extract from the report of Inspector Kelly of Brant, which reveals the strides of progress making in the older and wealthier counties under the influence of intelligent direction.

"Perhaps the two most tastefully furnished school-rooms in the county are in the Cainsville school. There, in addition to a good library and a valuable cabinet museum of minerals, comprising also sea shells, fine specimens of coral are to be found. On brackets around the Principal's room are marble busts of the foremost poets and novelists of England. There are also samples, in small glass bottles, of the different kinds of grain grown in the country; models of full-rigged ships, of reapers, mowers, ploughs, harrows, etc." Here is an example worthy of imitation, and more eloquent than a whole sermon on æsthetics.

REPORTS OF THE HIGH SCHOOL INSPECTORS.

Both the Inspectors close their reports with emphatic expressions of satisfaction with the general efficiency of the high schools and collegiate institutes. Dr. McLellan says:—"There are but very few weak schools, and even those are doing work that ought not to be despised; while many really good schools are doing work which merits high praise I have seen many of the best high schools in the United States, and a few of the best in Great Britain, and I feel sure of two things; that in the department of Mathematics our schools are superior to any I have seen, and that in general standing they are inferior to none." It is only necessary to point to this testimony to confute the few misanthropes who are continually repeating the charge that our high school system is radically defective. The real fact stands out plainly that in proportion to their cost they are about the best secondary schools in existence. But this is quite different from asserting that they have reached absolute perfection. And, as might be expected, the Inspectors dwell more upon the apparent defects than upon the many excellencies. Both officers report that reading and writing need more attention, and recommend that these subjects shall no longer be merely nominal at the Entrance Examination. As we lately pointed out, these subjects should have a higher value attached to them, and a higher standard of attainment should be exacted. Both public and high schools would immediately respond to the call for better results. The Inspectors agree in placing a high value on English Literature and urge the necessity of giving it a still more prominent position on the course of study. The Senior Inspector in his usual pregnant style points out the mischievious effects of forcing the study of formal grammar on children at an age when the "subtle exercise of the reflective faculties is clearly impossible." He says:—"There is still, amongst many, a *furor* in the business of parsing and analysis," and expresses the hope that "the English language will be taught in a more practical way—as in the construction and re-modelling of sentences, the comparison of faulty with correct forms of expression, practice in epistolary writing, in simple narrative and descriptive composition, and the study of selections from the great masters of English whose 'sweet and proper utterance' has made the English tongue the glory of the English race."

Both Inspectors agree with the JOURNAL in asking aid for the establishment of good reference libraries in all our schools, and instances are quoted where the personal enthusiasm of head-masters has secured the desirable end, even without the assistance of government aid. We are glad to find the Senior Inspector emphatically condemning the excessive number of options recently introduced into the high school programme, and strongly recommending that the choice of studies should not be left to immature boys and girls, nor even, so much as now, to parents who are not much better qualified to make a wise selection. "The sooner," he remarks, "we return to a judicious *fixed course* with comparatively few options, the better it will be for the cause of education in this Province," and we believe that the evils already cropping out under the elective system, sufficiently establish the correctness of that opinion.

For the present we must be content to leave many excellent suggestions unnoticed. In regard to Science we have only space to put the following sentences beside the remarks of the JOURNAL on the same subject in our last number:—

"The department can make science obligatory, and, if necessary, substantially reward proficiency in this branch; the Universities can aid the Department in this work by giving elementary science a place in their primary examinations. Is it too much to ask the Provincial University to follow in this respect the example of the University of London?" What will be the reply?

MORAL EDUCATION.

On Dec. 27 last, a committee of the Wisconsin Teachers' Association presented a report on this topic. Their able paper sets out by stating that the object of the public schools is to fit the young for intelligent citizenship. Foremost among the duties of schools, therefore, is that of inculcating in the minds of their pupils those moral principles upon which social order and good government rest. There is a secular morality which is not opposed to religious morality. As the result of human experience, it is recognized by all civilized peoples, taught by the philosophers, and sanctioned by the creeds of all enlightened nations. This morality can and must be taught apart from religion but not in hostility to any of its forms. It must be taught without limiting it to the mere inculcation of precepts. It means the formation of character; the problem therefore is:—Can anything be done to help in rendering more effective the work of the schools in the formation of character?

Something will be done towards this by the distinct and general recognition of the fact that the formation of right character is one of the principal aims of the school. Good government is a means towards this great end. There are schools which are governed to death, out of which all life, naturalness, spontaneity, and enthusiasm are crushed by over-government and machine-like order. There are other schools in which intellectual training absorbs the attention and becomes the great end. Management and discipline are looked upon as merely incidental means for securing conformity with the general routine and not for touching the springs of life in the child, to make the better elements of his nature supreme and help him to grow into noble character. A great step will have been taken when these imperfect views are abandoned and the thought of moulding character substituted for all lower aims. An attempt should be made to put into concise and simple form the essential elements of right moral training in the schools to serve as a guide and help to teachers.

The principal elements of moral training are: (1) The formation of right habits, (2) the inculcation of right principles, and, (3) the development of moral judgment. The work of the teacher is three-fold: (1) He must keep about his pupils right conditions for healthful moral development, (2) he must show good management, and, (3) he must give right instruction in such a way as to develop moral thoughtfulness. Management is a safer term than government, for the latter emphasizes external restraint and force while the former sets forth more clearly the right relation of the teacher to his school, and brings to view the fundamental thought that the teacher must enlist on his side, in the interest of progress and uprightness, the motive forces in the child's nature, and also the social forces in which he lives. The children of a free country must be educated for freedom, that is, they must be brought as early as possible under the sway of the motives which ought to control their lives, and be made properly amenable to that force of public opinion under which, as good citizens, they must live. An imperfect result of this sort is better than the most absolute submission to external force, which is indeed indispensable, but subordinate. This is what Rousseau meant by saying "let the pupil be his own master in appearance, but do you take care to be in reality. There is no subjection so complete as that which preserves the appearance of liberty; by this means even the will itself is led captive."

Locke wisely puts the opposite course in striking contrast:—"Slavish discipline makes slavish temper, and so leads to hypocrisy; and where it is most successful it breaks the mind, and then you have a low-spirited, stupid creature, who, however with his unnatural sobriety he may please silly people, ...will probably prove as uncomfortable a thing to his friends, as he will be all his life a useless thing to himself and others."

Under the head of "CREATING RIGHT CONDITIONS" the Report mentions (1) *Frank relations.* (2) *Order and regularity.* (3) *Cheerfulness.* Children are naturally joyous. They are repelled by gloom, austerity, and fretfulness. They unfold healthfully and properly in a cheerful and inspiring atmosphere. (4) *A Right Public Opinion.* Very rarely will a child not rather defy the teacher than defy the public opinion of the school. It follows (1) that the teacher should earnestly strive to shape the public opinion of the school, and (2) that he should avoid putting the child in such circumstances that he will have to choose between obeying the teacher and obeying the public opinion of the community to which he belongs.

(1) The teacher shapes the public opinion—(*a*) by securing the regard and esteem of his school; (*b*) by talking familiarly with the pupils, and publicly to the school, of matters which interest the community in such a way as to enlist their sympathies and opinions on the right side; (*c*) by enlisting the more decided characters in support of the right, through appeals to their sense of honor and by giving them confidence and such responsibilities as they are capable of undertaking; and (*d*) by avoiding scrupulously all actions which will tend to concentrate public opinion in favor of wrong-doers and against himself. If he is wise and kind, he will be able to keep public opinion on his side, and so to lift it to a higher plane. If he cannot do this, it becomes a serious question for him whether his usefulness in that field has not departed.

(2) Punishment or severe reproof in the presence of the school is a matter of great delicacy, and should be avoided, if possible, unless the teacher is sure that he can keep the sympathies of the school with him. It is especially likely to beget defiance on the part of the culprit, and this, from its apparent bravery, will often gain him the sympathy of his companions, and thus become the means of fostering wrong views in the minds of the pupils as well as wrong relations to the teacher. Good management will avoid, so far as possible, all occasion for such results.

HABITS are formed by doing. Actions performed regularly, uniformly, and without internal opposition, become so seated in the organism of the person doing them that they are executed unconsciously. The five great school habits are promptness, regularity, order, industry, and accuracy. Some habits may be secured incidentally, and without distinct, intelligent effort of the teacher to implant them; others require more skill and insight. Honesty, for instance, will not grow in the school without special intelligent care. Every recitation affords opportunity, and unless intelligently supervised, incitement to dishonesty. To get help surreptitiously is a natural inclination of the child who is being tested; and it is to be feared that school experience not unfrequently serves to strengthen rather than correct it.

There are three principal ways of implanting right ideals:—(*a*) by example, (*b*) by maxims, (*c*) by the formal lesson. The latter involves grave difficulties. It is liable to be dry. The child may re-act against it so as to be hardened by it. It may tend to formalism or sentimentalism by failure to keep it in close and vital relations with conduct. These difficulties are to be overcome by thoughtfulness and tact. The lesson may take four different forms:—(1) The committing to memory of short selections, maxims, single verses of poetry—form

specially suited to primary pupils; (2) the reading of stories inculcating some lesson, and the talking of them over with the class so as to develop moral judgment in applying principles few and easy, with numerous and complex applications; (3) the reading of biographies and anecdotes which have power to inspire high enthusiasm and create noble ideals in the youthful mind; (4) the discussion of occurrences in the school and of items of current news which furnish material for interesting application of great principles, and give them added weight by the sense of their practical utility. (5) Three special topics demand notice, viz., the use of intoxicating liquors, the use of tobacco, and the reading of coarse and debasing publications. The teaching on these subjects should be strictly temperate and non-partisan. The pupil must understand clearly the evil results of these practices, and their moral sense must be roused against them.

Such is the gist of the Report of which we have given the briefest possible outline as an effective counterpoise to the well-meant but mistaken efforts that have lately been made in this province to make Scripture lessons compulsory in the schools. The importance of the subject cannot be over-rated, and the *resume* given indicates with considerable grasp and lucidity the public school teacher's mission in the great moral vineyard. Blessed is he who labors diligently, sweetly, hopefully; he shall not lose his reward.

A considerable portion of the press has taken more or less notice of the question of school grants. It is remarked that the smaller and poorer a section is the less aid it receives from the government. It is practically impossible to distribute the grant on general principles so as to avoid some hardship in individual cases. The problem is complicated but we feel sure of these points—(1) the amount of the Legislative grant to both public and high schools ought to be largely increased; (2) in distributing the grant, efficiency as well as average attendance ought to be taken into account, and (3) the best general test of the efficiency of the average public school will be found in the qualification of the teacher, for the teacher *is* the school. (4) If a special grant of, say, $10 for a third-class certificate, $20 for a second, and $50 for first were made it would tend to relieve those small sections which maintain good schools. A general examination of the schools would scarcely be practicable, and the best general tests remaining are (*a*) amount to be paid for salaries, and (*b*) the qualification of the teachers. We believe the latter the most reliable.

We greatly regret to hear of the illness of Mr. W. Ferguson, Inspector of Public Schools, South Grey. We hope to hear, very soon, of his complete recovery, and his return to those duties which he has hitherto performed with noted zeal and efficiency.

School Machine Work.—Some very reputable teachers can teach a subject without knowing it. They mistake facility in the handling of classes, in asking questions, and conducting recitations, for successful teaching. Such work is machine-work, and can give only machine results. The first condition of all successful teaching is knowledge of what is to be taught.—*Minnesota Journal of Education.*

REPORTS OF CASES.

We present this month the following, in continuation of the subject commenced some time ago:—

Arago tells of his boyhood at the Polytechnic School at Paris, perhaps the greatest science school of the world, about the beginning of the present century, when it numbered among the instructors such names as La Place and Legendre. The examinations were not on books but on subjects, and the choice of any method in solving a problem involved the necessity of giving some reason for making the choice, and why the student preferred it. In Legendre's room, at the entrance to which he met his predecessor carried out by two servants, having fainted from the severity of the ordeal, he was also marked for bad character because he gave one of Legendre's own methods, that official thinking it a case of bribing his good opinion, and only got off by a learned discourse on the reasons of his preference.

Even here the two science methods came into conflict, for they had not alone the Legendres, but a certain number of the text-book teachers. One of them would only look at the answers of problems, and his students would go through on the blackboard with a nonsensical mass of figures and formulæ, but ending with a correct result, when he would dismiss them with: "Good! good! perfectly good!" amid the jeers of the class. On one occasion, when he had a grudge against some student, he cooked up a perfectly crushing question, which he was to throw upon him when the class assembled. But the student, having a suspicion of something, was on his guard. The professor opened the question by the apparently innocent remark—I now copy the account—

"Leboullanger, you have seen the moon?" "No, sir." "How, sir; you say that you have never seen the moon?' "I can only repeat my answer, No, sir." Beside himself, and seeing his prey escape him by this unexpected answer, the professor addressed himself to the inspector charged with the observance of order that day, and said to him, "Sir, there is Leboullanger, who pretends never to have seen the moon." But that officer could not think of any law that had been violated. "What would you wish me to do?" stoically replied the inspector. Repulsed on this side, the professor turned once more to Leboullanger, who remained calm and earnest in the midst of the unspeakable amusement of the whole amphitheatre, and cried out with undisguised anger, "You persist in maintaining you have never seen the moon?" "Sir, I should deceive you if I told you I had never heard it spoken of, but I have never seen it." "Sir, return to your place."

The following incident shows what can be accomplished by one who has faith in himself:

A young teacher found the school-house surrounded by a fence made of boards set up on end—twelve feet in height. "It is to save the windows," said the trustee. "It looks like a prison," said the teacher. A heavy padlock was on the door. "The boys break it in unless it is strongly fastened," said the trustee.

The next spring if you had passed you would have seen that the fence had been removed, a pretty lawn had been made, trees set out, flower seeds had been sown, a plank walk laid down, and an air of neatness and joy prevailed. How was all this done? The teacher said, "The boys simply saw I was in earnest; I meant what I said." He either could not or would not give any other reply. And what more is needed?

Mathematical Department.

SOLUTIONS TO ENTRANCE ARITHMETIC.

(See January number, Page 6, for Questions.)

1. Indicating the work first, we have the expression
$(59404+47675)(59404-47675)\div 7\times 13\times 19$,
$=(107079\times 11729)\div 7\times 13\times 19$,
$=(15297\times 11729)\div 13\times 19$,
$=1790192613\div 13\times 19$,
$13\overline{)1790192613}$
$19\overline{)137707124}-1$,
$7247743-7$,
$\therefore$ Quotient $=7247743$, and remainder $=92$.

2. Sold 5 for 11c., or 5 doz. for 132c.
Bought 5 doz. " 50c.
Gain on 5 doz. = 82c.
" 20 " = 328c.
" 11 boxes = \$36.08.

3. Cost of fence $=\$1\frac{1}{2}\times 2(40+65)$
$=\$3\times 105=\$315$.
Cost of land $=\frac{40\times 25}{160}\times\$300=\$1875$,
which is *less* than ten times the cost of the fence.

4. If C gets 1 share, A gets 2 shares, B 2 shares $-\$70$,
$\therefore$ 5 shares $-\$70=\$1200$,
1 share $=\$1270\div 5=\$254=C$'s,
$\therefore$ A's $=\$408$, and B's $=\$438$.

5. $\frac{\frac{2}{5}\text{ of }8\frac{1}{3}+2\frac{1}{7}\text{ of }5\frac{5}{6}}{\frac{3}{7}\text{ of }3\frac{1}{2}-\frac{1}{2}\text{ of }\frac{1}{3}\text{ of }2\frac{2}{3}}=\frac{\frac{1}{3}^0+\frac{2}{2}^5}{\frac{3}{2}-\frac{1}{9}}=\frac{60+225}{27-8}=\frac{285}{19}=15$.

6. $\frac{(1\cdot302+3\cdot2589+40\cdot93)\times\cdot00297}{90\cdot09}$
$=45\cdot4909\times\cdot00297\div 90\cdot09$,
$=6\cdot4987\times\cdot003\div 13=\cdot00149962$.

7. Price $=\frac{2875-1083}{2000}\times 16\frac{1}{4}$
$=\frac{1792\times 65}{8000}=\cdot224\times 65=\$14.56$.

8. A must allow B a start of 1 minute, *i.e.* one sixth of a mile $=293\frac{1}{3}$yds.

9. Gang can do $\frac{1}{8}$ of work each day; in 5 days $\frac{5}{8}$ work done;
$\frac{3}{8}$ work finished by 2 men in 5 days.
$\therefore$ 1st man did $\frac{3}{16}$ work in 5 days.

10. Interest $=\$275.80\times\frac{9}{365}\times\frac{7}{100}=\$4\cdot813$.

ELEMENTARY ALGEBRA.

1. Multiply
$$\begin{array}{r} a+b \\ c+d \\ \hline ac+bc \\ \quad ad+bd \\ \hline ac+(bc+ad)+bd \end{array}$$
Observe that the product of the two extreme terms, ac and bd, is the same as the product of the two terms within the bracket, bc and ad. Each pair gives $abcd$. Suppose we wish to *un*-multiply such an expression, we have the clew to the method. Examine the case.

2.
$$\begin{array}{r} x+5 \\ x+4 \\ \hline x^2+5x \\ \quad 4x+20 \\ \hline x^2+9x+20. \end{array}$$
The product of the outside terms is $20x$. It is necessary then to split the $9x$ into two parts whose product shall be $20x^2$. In other words we have to find two numbers whose sum is 9 and their product 20. The only such numbers are 4 and 5. Thus we have,
$x^2+5x+4x+20$
i.e. $x(x+5)+4(x+5)$, or $(x+5)(x+4)$.

3. Consider $8x^2+34xy+21y^2$. We have to find two numbers whose sum is $34xy$ and their product $8\times 21\times x^2y^2$. Expressing 8×21 in prime factors, $2\times 2\times 2\times 3\times 7$, we can easily form two numbers, 2×3 and $2\times 2\times 7$, whose sum is 34. Thus we get
$8x^2+6xy+28xy+21y^2$
$=2x(4x+3y)+7y(4x+3y)=(4x+3y)(2x+7y)$.

4. $11a^2-23ab+2b^2$. Product $+22a^2b^2$, sum $-23ab$. The signs show that both are *minus*; they must be -1 and -22. Then $11a^2-22ab-ab+2b^2=11a(a-2b)-b(a-2b)$, and the factors are $(a-2b)(11a-b)$.

5. $4(x+2)^4-37x^2(x+2)^2+9x^4$.
Product must $=36x^4(x+2)^4$, and sum $=-37x^2(x+2)^2$;
-1 and -36 are plainly the numbers; hence we have,
$4(x+2)^4-36x^2(x+2)^2-x^2(x+2)^2+9x^4$
i.e. $4(x+2)^2\{(x+2)^2-9x^2\}-x^2\{(x-2)^2-9x^2\}$
or $\{(x+2)^2-9x^2\}\{4(x+2)^2-x^2\}$
$=(x+2-3x)(x+2+3x)(2x+4-x)(2x+4+x)$
$=4(1-x)(1+x)(4+x)(4-3x)$.
The solution becomes neuter if we write k for $(x+2)^2$.
The given expression then becomes
$4k^2-37kx^2+9x^4=(k-9x^2)(4k-x^2)$.
Now restore the value of k, and we get the same factors.

6. $(12b^2-29bc+15c^2)x^3+(23b^3-31b^2c-9bc^2+15c^3)x^2+(10b^4-6b^2c^2)x$
Set aside the common factor x; factor the $12b^2-29bc+15c^2$ by the preceding method $=(4b-3c)(3b-5c)$; observe that $10b^4-6b^2c^2=2b^2(5b^2-3c^2)$, that $(5b^2-3c^2)(3b-5c)=15b^3-9bc^2-25b^2c+15c^3$, and that $23b^3-31b^2c-$&c. $=(5b^2-3c^2)(3b-5c)+2b^2(4b-3c)$. Now write k for $(4b-3c)$, m for $(3b-5c)$, and y for $5b^2-3c^2$, and the given expression becomes simplified to $kmx^2+(ym-2kb^2)x+2b^2y$. Now take together the first and third, second and fourth terms, taking out the common factors and we get $kx(mx+2b^2)+y(mx+2b^2)=(mx+2b^2)(kx+y)$. Restore the values of m, k, and y, and we have the factors $x(3bx-5cx+2b^2)(4bx-3cx+5b^2-3c^2)$.

Elegant examples for practice will be found in *McLellan's Teacher's Handbook*, p. 71, and elsewhere, *e. g.*
$6(x^2+xy+y^2)^2+13(x^4+x^2y^2+y^4)-385(x^2-xy+y^2)^2$;
$21(x^2+2xy+2y^2)^2-6(x^2-2xy+2y^2)^2-5(x^4+4y^4)$;
of which the factors are, respectively,
$2(4xy-3x^2-3y^2)(61x^2-49xy+61y^2)$, and
$2(5x^2+4xy+10y^2)(x^2+10xy+2y^2)$.

ONTARIO.—JULY EXAMINATION, 1882.

First Class Teachers—Grade C.

EUCLID.

Time—Three Hours.

1. The three angles of a triangle are together equal to two right angles.

If triangles be formed on the sides of a polygon of n sides by producing the alternate sides to meet, the sum of the vertical angles of these triangles is equal to $2n-8$ right angles.

2. Establish the converse of the following: The complements of the parallelograms, which are about the diameter of any parallelogram, are equal to one another.

3. To divide a given straight line into two parts, so that the rectangle contained by the whole and one part may be equal to the square on the other part.

Point out all the lines in the figure that are divided similarly to the given line.

4. By the assistance of Prop. 12, Bk. II., when the sides of a triangle are 25, 45, and $20\sqrt{10}$ find its area.

5. If in a circle all possible chords be drawn passing through the same point in the circumference, and these chords be doubled in length by production, the locus of the extremities of the lines so formed is a circle.

6. The angles in the same segment of a circle are equal to one another.

If a line of constant length move with its extremities in two fixed lines, and at the ends of the first line lines be drawn perpendicular to the two fixed lines, the locus of the intersection of these lines is a circle.

7. ABC is a triangle, C being a right angle. On CA, CB are described segments of circles containing angles equal to CBA, CAB respectively. Show that the circles of which these segments are parts touch one another.

8. In a given triangle to inscribe a circle.

If the points of contact be joined show that the triangle thus formed can be equiangular to the original triangle only in the case in which both are equilateral.

9. Show, after the manner of Euclid, that triangles are to one another in the ratio compounded of the ratios of their bases and altitudes ; and prove that this is algebraically equivalent to product of ratios.

10. Similiar triangles are to one another in the duplicate ratio of their homologous sides.

Two circles touch, and through the point of contact lines are drawn cutting the circles, and the ends of these lines are joined. Prove that the triangles so formed are as the squares of the diameters of the circles.

Hints.

1. I. 32.

Sum of int. ∠'s. of the n △'s $=2n$ rt. ∠'s.
$=$ all the vertical ∠'s. + twice all exterior ∠'s. of fig.
$=$ " " " $+8$ rt. angles.
∴ Vertical angles alone $=(2n-8)$ right angles.

3. II. 11. There are five such lines.

4. Let x = part between obtuse angle and perp.
then $25^2+44^2+50x=4000$.
∴ $x=27$.
The perp. may now be found by I. 47 and thence the area.

5. Let A be the given point in the circumference. Describe another circle equal to the given circle and touching it externally at A. Produce the chords of the first circle through A to meet the circumference of the second circle, then the enclosed arcs are respectively equal. The diameters are also equal, whence it may be shown that all the other chords are respectively equal.

6. III. 21. Let CA and CB be the two fixed lines. From A draw AD perp. to AC cutting BD, the perp. from B on BC, in D. From A draw also AE perp. to BC, and from BF perp. to AC, and let these intersect at G. A circle will go round $ADBC$, III. 22. The middle point H, of CD is the centre of this circle. In the triangle AHB, the angle at H=half the angle C which is constant. Also the angles HAB and HBA are equal and constant. Hence when AB is constant the triangle HAB is constant, and CD or $2AH$ is constant, *i.e.* the point D is always in the circumference of the circle $ABCD$. Similarly G is always in the circumference of $CEFG$.

7. Draw CD perp. to AB, and it makes the angle DCB=angle at A, and angle ACD=angle at B. Through C draw CK perp. to CD. Bisect BC at right angles by QK meeting CK in K, then $CK=KB$, and a circle described through C with centre K passes through B. The angle in the segment outside the triangle=angle at A. Similarly the circle touching CD at C and passing through A has an external segment whose angle=angle at B. It is manifest that the circles touch one another at C.

8. IV. 6. Join EG, GF, BE. The angles at D are the supplements of the angles at A, B, and C; also, the angles at D are double the angles E, F, G of the triangle EFG ; *i.e.*, the angles of EFG are half the supplements of the angles of ABC. Hence unless the angles A, B, and C are equal, the angles E, F, G are not equal. And when A, B, C are equal angles, the triangles ABC and EFG must be equilateral.

10. Draw the common tangent. It is easily shown, III. 31, that the triangles are similar, and their bases parallel. Draw the diameters parallel to these bases and complete the triangles by joining the extremities with the point of contact. These triangles are similar to the first triangles. Their ares are as the squares of their bases. *i.e.* as the squares of the diameters. Hence the first triangles are as the squares of the diameters.

CORRESPONDENCE.

Mr. J. H. Thomson, Moncton, Ont., asks for solutions to the following :—

1. If a shot weighing 32 lbs. be fired from a gun weighing 2 tons, with a velocity of 1,120 feet per second, and if the friction between the gun and the ground be equal to a force of 1 ton, how far will the gun recoil?

2. A body weighing 12 lbs. slides with uniform velocity down a plane that rises 5 in 13. How much energy would have to be expended in order to drag the body 13 feet up the plane by means of a string stretched parallel to the plane?

3. A ball is fired from the ground at an angle of 45°, so as just to pass over a wall 10 feet high at a distance of 260 feet. How far will it strike the ground from the wall? $g=32$.

Mr. A. T. DeLury, Manilla, Ont., sends us the following solution of number 6, page 5, in January number. We return cordial thanks.

Let OAB be △ given by question. Produce OA and OB to C and D making $OC=m.OA$, and $OD=n.OB$. Then OC and OD represent the forces. Complete □ $ODFC$. Then OF represents resultant. Draw CEK parallel to AB cutting OF in E and OD in K. Then OAG and OCE are similar △'s.

∴ (Euc. VI. 4.) $\frac{OC}{OA}=\frac{OE}{OG}$.

But $OC=m.OA$. ∴ $OE=m.OG$.

Again ∠ EFC and GOB are equal (Euc. I. 29), and ∠ OGB= ∠ AGE= ∠ CEF. ∴ △CEF and GOB are similar.

∴ $\frac{CF}{OB}=\frac{FE}{OG}$. But $CF=OD=n.OB$. ∴ $FE=n.OG$.

∴ The whole $OF=(m+n)OG$.
∴ $(m+n)OG$ represents resultant.

Again. △CEF and OKE are similar.

∴ $\frac{OE}{EF}=\frac{KE}{EC}$. But $\frac{OE}{EF}=\frac{m.CG}{n.OG}=\frac{m}{n}$. ∴ $\frac{KE}{EC}=\frac{m}{n}$

And since CK is parallel to AB it may easily be proved that

$$\frac{KE}{EC}=\frac{BG}{GA}. \quad \therefore \frac{BG}{GA}=\frac{m}{n}. \quad \therefore m.GA=n.GB.$$

which shows position of OG. Hence the proposition.

Mr. A. D. Fraser, P. E. I., presents a neat solution of problem 5, page 252 of December issue.

$DG^2+AD^2=AE^2+EG^2$. (I. 47 & Ax. 1.)
i.e. $DG^2+AB^2+BD^2+2AB.BD=AE^2+EB^2+BG^2+2EB.BG$ (II. 4.)
but $DG^2+BD^2=BG^2$ and $AB^2=AE^2+EB^2$. (I. 47.)
∴ $2AB.BD=2EB.BG$.
i.e. $AB.BD=EB.BG$.

Mr. T. F. Spafford, Demorestville, sends the following for solution :—

4. A sphere, diameter 4 feet, is submerged until its centre is 5 feet beneath the surface of a pond ; divide the sphere into two equal parts by a horizontal plane so that the surfaces shall be equally pressed.

5. If $x=\left(\frac{a+b}{a-b}\right)^{\frac{2mn}{n-m}}$, then $\frac{1}{2}\cdot\frac{a^2-b^2}{a^2+b^2}\left(\sqrt[m]{x}+\sqrt[n]{x}\right)=\left(\frac{a+b}{a-b}\right)^{\frac{m+n}{n-m}}$

6. Solve,—

$$\frac{xy}{4y-3x}=20 \; ; \quad \frac{xz}{2x-3z}=15 \; ; \quad \frac{yz}{4y-5z}=12 \; .$$

C. Fessenden, B.A., Napanee, kindly points out that the words suggested in emendation of question 6, p. 251, of last vol., would not be an improvement. We regret that we have not more space to give the acute observations made on the problem. We hope all our correspondents will continue to let us know of their wants.

The Boat the Gnats Build.—Did you ever hear about the wonderful boats the gnats build? They lay their eggs in the water, and the eggs float until it is time for them to hatch. You can see these little egg rafts on any pool in Summer. The eggs are so heavy that one alone would sink. The cunning mother fastens them all together until they form a hollow boat. It will not upset, even if it is filled with water. The upper end of these eggs is pointed, and looks very much like a pocket flask. One egg is glued to another, pointed end up, until the boat is finished. And how many eggs do you think it takes? From two hundred and fifty to three hundred. When the young are hatched they always come from the under side, leaving the empty boat afloat. These eggs are very, very small. First they are white, then green, then a dark gray. They swim just like little fishes, and hatch in two days. Then they change again into a kind of sheath. In another week this sheath bursts open and lets out a winged mosquito. It is all ready for work. There are so many of them born in a summer, that, were it not for the birds and larger insects, we should be "eaten up alive."—*Our Little Ones.*

Correspondence.

KINGSVILLE ONT., Jan., 29th, 1884.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—I am one of the many who take pleasure in reading our common property the CANADA SCHOOL JOURNAL, although at times I hold to opinions opposite to those advocated by it. At present I beg to explain my disagreement with your editorial on "History in the Public Schools" in the January number last.

You quote "proceed from the known to the unknown," then desire that we start at the Victorian age and work backwards. Pray, sir, what do public school children who have not started History know of the present age? They know partially that two contending factions are on the public stage, that *Grits and Tories* (unexplainable terms to them) are in opposition but their ideas of public weal, business, or advancement are vague indeed.

And, sir, are the minds of the children capable of grasping any ideas of the advancement, progress, and stupendous work of the present age in the study of *History* without first having other periods known to institute comparisons with?

Perhaps my views are too conservative in this respect and I need more enlightenment; but I hold with "beginning at the beginning" and working down. My reasons I will endeavor to explain.

The first part of the *History* of most countries is not very distinct. It is traditional and much in the form of a simple yet attractive story that a beginner (a child of ten or twelve) would readily understand. The pupil could trace, with proper teaching, the growth of the nation and with his mental eye look back into the story, and picture the events as easily as he now can a Sabbath School story book or one of *Beadle's Dime or Nickel* mental poisons. It will be like a child watching builders erecting a house,—foundation, cellar, sidewalls, windows, doors, chimneys, are easily understood by him in parts but if he looks at the completed edifice, as he would at the present aspect of the Empire of Great Britain or the Dominion of Canada, he would but very indefinitely comprehend the steps, or the order of their procedure in producing the present condition. Children, too, have time to watch these steps rather than to analyze steps from effects, and if they but correctly have the successive stages of history delineated for them they will be interested enough when they are older to inquire into the complex problems of nineteenth century history, to see the repetition of history, to see the reasons of certain procedures, to comprehend the allusions to historic events that have influenced the people, language, commerce, and international affairs, made in the public press. As for the amassing and committing to memory of *dry bones and numberless dates*, I think that about one-tenth of what we have will be ample.

Why have not historians tried to write a text book commencing at the present age to work backwards? Because it is next to impossible, it would be such a see-saw, intermingled business that it would never see the light of day. It looks very pretty perhaps as a theory and may appear to have a parallel in science, geography, etc., but even in these studies we must commence at the beginning. In arithmetic we do not start at the results of ages of calculations.

There is a tendency to look upon every new idea advanced in school affairs as the best; that all twenty year old notions are questionable if not useless; that perhaps our father and their ideas were behind their precocious children. I have tried teaching of things of the present time, but found that I had to refer back so much to explain terms that it was nothing but giving the whole in a lump, an impossibility. Is not the present entrance examination in history a cause of such land-mark, bird's-eye, skeleton, date-be-spangled teaching of history? The questions range from 55 B. C. to A. D. 1876 about, over more territory than, though perhaps not so thoroughly desired as, first class teachers' history requirements.

Trusting that I have not trespassed too far on your valuable space.

I remain yours, very truly,

FRANK LEIGH.

[We are glad our correspondent has given his own views on this subject. We hope many of our friends will discuss educational matters from their own stand points. It is useful to have both sides of a question clearly presented, and is the only way in which sound progress in methods can be accomplished. In addition to what we have already said on the teaching of history we submit the following points.

1. More than 75 per cent of the pupils leave the public schools without entering the fourth class in which the study of history is begun.

2. Only a very small fraction of the remainder stay long enough at school to master even the barest outline of English and Canadian history.

3. Consequently, for all but a very small fraction the choice lies between the ancient Britons and the story of our own times.

4. We have never proposed that a history should begin with 1884 and go backwards. We maintain that it would in all respects be better in the first place to teach the history of the last two hundred years rather than of the first thousand as introductory to the great study of history.—EDITOR.]

A TEACHER FROM THE OLD COUNTRY, who is engaged in the County of Haliburton, sends a cheery, well-written letter which has the right ring about it. He hopes "to climb by degrees to the top of the tree" and will, we hope, attain his ambition. In commenting on the article, "School Matters in England,"—see Sep. 1883,—he gives the following interesting information about English teachers,—"The youthful aspirant to the office of teacher, must have reached the 6th standard, must pass the Inspector's Candidate's Examination and then undergo the Pupil Teacher's Course of 5 years; then if successful in all the examinations, he or she is supposed to go for 2 years to one of the Training Colleges, but this is sometimes evaded."

In reply to Lennox Teacher he recommends constant employment as a cure for whispering, and directs attention to the articles on the subject in the Jan. and Nov. numbers of last year's JOURNAL.

MR. SAMUEL ATTER, Abingdon, requests replies to the following:—

1. In case a teacher loses, say ten days in a year; in deducting their value from his salary, how would the price per day be obtained? that is, would the price per day be found by dividing the amount of his yearly salary by 220 the number of teaching days in a year, or by dividing the salary by 313, the number of working days in a year, or by 365 the days in a year? (Teacher hired by the year.)

2. Can a school meeting be legally closed before 11 a.m., when no poll is demanded?

3. In case of nomination for trustee, how long is given for demanding a poll, or does the statute give any definite time; if an hour, would business have to be retarded so as to see if any would demand a poll?

4. If the school meeting be opened according to law, and a trustee elected by a majority of those present or without opposition by those present, but after his election a number more of the electors come and elect another man before 11 a.m., which would be the legal trustee?

An American student of Latin being confined to his room by sickness was called upon by a friend. "What, John," said the visitor, "sick, eh?" "Yes," answered John, "*sic sum!*"

Special Articles.

NOTES OF TALKS ON TEACHING.*

TALK IV.—READING.—THE SENTENCE.

I will repeat the fundamental principle of the art of teaching reading. Learning to read is learning a vocabulary of written and printed words. Each word is learned by repeated acts of association of the idea and the word. That which helps in these acts of association, and that alone, should be used in teaching reading. All other means are hindrances. I have shown that the effectiveness of the acts of association depends on the stimulus or excitement to the act. This stimulus comes primarily and mainly from the side of the idea. The vividness of the idea or mental picture in the consciousness, with the appropriate word, determines the result. The greatest difficulty to be found in the process of learning to read is in learning the first few words. The habit, so strong in the mind, of learning the spoken word, is to be carried over and used as a power in learning the written word. The word itself should be subordinate and secondary in interest to the child, to the idea that excites the mind. The word is to be learned consciously as a whole, and any attempt to analyze or synthesize it hinders the act of association by absorbing the attention. The means used to arouse the mind to acts of association, I have told you, are, objects, drawings upon the blackboard, made under the eye of the pupil, pictures, conversations, and stories. But there is another and still stronger means of association after the first few words have been learned, and that is the arrangement of words that recalls ideas in their relations or thought. Every object that we recall or think of is recalled in space. The more interesting the relation of the ideas one to another, the stronger will be the association. That is, it is a great help in learning words to learn them in sentences. We do not learn the word in order to read the sentence, but we read the sentence in order to learn the word. The question may here be asked, Why not begin with the sentence, as many do, with great success? My answer is, that the first written words, as I have said, present the greatest difficulties to the child. We can hardly comprehend how mysterious the strange forms are to the little one. We may get an inkling of the trouble if we have ever begun Greek, Hebrew, or Sanscrit. We may recall the fear that came over us, when we looked forward to the time when we must use the meaningless forms to get thought. The successful learning of the first few words, it seems to us, depends upon presenting the simplest obstacle to be overcome, and in making the child, the little learner, as unconscious as possible of the difficulty. The simplest step, then, consists in following a fixed and powerful habit of the child, by presenting a favorite object, and saying with the chalk just what the tongue has so often repeated. I have no doubt but what the skilful teacher could successfully begin with a whole sentence. My point is, that it is much simpler and easier to begin with the single words. Just as soon, however, as a few words have been learned, for instance, fifteen or twenty, short sentences should be taught by the objective plan; so that when the child sees the sentence he is able to get the thought that it expresses. There are many words that mean nothing alone, which should always be taught in phrases or sentences.

We come now to the discussion of oral reading, or getting thought by means of written or printed words arranged in sentences. A thought is ideas in their relations, and may be called the unit of expression. We cannot learn a single word without recalling the idea it expresses in some relation. You will remember what I have said concerning the different ways of getting thought. First, directly through the senses, by seeing, hearing, etc., objects in their relations. Second by pictures and drawings. Third, by language, both oral and written. In all these cases the thought is the same in the mind, differing only in degrees of intensity. The written sentence is simply one way of getting thought. The child has already, by long and continued practice, learned to talk, and to talk well. One thing above all others I wish to impress upon your minds, here and now—do not teach him to talk in any other way—that is, when he gets the thought by means of the written sentence, let him say it as he always has. Changing the beautiful power of expression, full of melody, harmony, and correct emphasis and inflection, to the slow, painful, almost agonizing, pronunciation that we have heard so many times in the school-room, is a terrible sin that we should never be guilty of. There is indeed not the slightest need of changing a good habit to a miserable one, if we would follow the rule that the child has naturally followed all his life. *Never allow a child to give a thought until he gets it.* Remember, and keep on remembering, my dear teachers, that the child has learned to talk, and that that teaching which mangles this grand power is needless and worse than useless. Let the child get the thought himself, in the easiest possible way, by means of the written sentences. One of the worst ways of teaching reading may be called, for want of a better term, the method of imitation. Now you will see that the valuable act of the mind, the thing to be done, is the child's getting the thought for himself, and by himself by the means, I repeat, of written words. If the teacher reads the sentence to the child, the child gets the thought through the ear from the teacher's lips, and the one thing he ought to do is prevented. I do not wish to be understood that the teacher should not read to the child. The teacher should make herself the best possible model of good reading, and through her reading present a high ideal of expression for the child to attain. What I wish to impress upon you is, the one pedagogical principle that stands above all others—we learn to do by doing. Oral reading has one function, one use to the teacher; it is a means of knowing, as I have said in a former talk, whether the thought is in the mind of the reader, how it is there, if every relation is known, and the intensity of the thought felt by the reader. This grand function of oral reading may be perverted or entirely destroyed. First and foremost, by not waiting for the child to get the whole thought before he gives it. Second, by training the child to imitate the teacher's voice, her pauses, emphasis and inflection; and, third, by a useless struggle with the parts of the word in forcing analysis before the whole word is clearly in the mind. The alphabet method is the best possible means of obstructing the mental action of the child in learning to read; too early phonic analysis the next. With the child thought has always controlled expression. Why should we throw this grand power aside, and try to teach a child oral expression by means of pauses and imitated inflection and emphasis? The initial capital of a sentence and the punctuation have one use—they enable the child to get the thought. When the thought is in the mind they have no use. You will see, then, that if you follow the principle—thought controls expression—much of the labor and toil of the teacher, in trying to force artificial expression by training a child to pause at commas and periods, to raise the voice or let it fall at the end of sentences, to give stress when they see diacritical marks, is not only useless, but positively injurious and nonsensical.

TALK V.—READING.—SCRIPT.

The written word to the little child has no element of attraction. It is, on the other hand, a repelling object. I have tried to show how the difficulties of learning the first words may be overcome by

* Notes of Talks on Teaching, given by Francis W. Parker, at the Martha's Vineyard Summer Institute, July 17 to August 19, 1882.

the stimulus of the idea in acts of association. It is a matter of great importance to steadily overcome the repulsion occasioned by the written word. The repulsion will grow less and less, and the acts of association will be made easier by continued familiarity with the new forms, if the interest and the appetite of the child for words is sedulously cultivated, through the pleasure that the objects and pictures excite. All words are made, as you know, of only twenty-six different forms. The less the mental action it requires to see these forms, the easier will be the acts of association. It is important to impress these forms upon the mind in an easy, natural, semi-unconscious way. As I have shown, the best possible way to impress the word forms upon the mind, is to write them—to make them. We hear the objection very often that a child does not learn the letters by the new method. He does not learn their names, but he learns *them* by continually making them. What is the best proof that any object is clearly in the mind? A word description is weak beside the representation of the object in drawing. This brings to the question so often mooted, whether we should use print at the beginning, or print and script, or script alone. I will try and present the arguments in favor of using script alone, not denying, however, that script and print may be used at the ame time with good effect. When two or more ways of teaching are presented, all of which may be defended by good reasons, reasons that do not directly violate a principle, the question of choice then becomes a question of economy. If we begin with print, it certainly fixes the printed forms in the mind by reproducing them on the slates, so that if the teacher uses print alone at the beginning, she should train the children to make the printed forms. But, making the printed forms is not a means of expression that a child ever uses after the first few months, or the first year. Writing is the second great means of language expression. It should be put into the power of the child just as soon as possible, in order that he may express his thoughts as freely with the pencil as with the tongue. This fact needs no argument. Written expression is as great a help to mental development as oral expression; and, indeed, in many respects, it stands higher. Written expression is silent, the child must give his own thought, in his own way; thus developing individuality. The greatest difficulty in all teaching in our graded schools is the sinking of the individual in the mass. In written expression we find a means of reaching individuality through the mass. Why not, then, begin at the beginning with this mode of expression that the child must use all his life, and every day of his life?

Why not teach printing and script together? Because it violates the rule of perfect simplicity. Train the child to use one set of forms, made in one way, and one alone. In my experience extending over eleven years of supervision of primary schools, I have never known the failure of a single class to change from script to print, easily and readily, in one or two days. What, then, is the use of print at first? What logical reason can be given for its use, if the step from script to print is so very simple? The writing of the words by the child on blackboard, slates and paper, furnishes a vast amount of very interesting and profitable busy work. In writing the first word the child begins spelling in the only true way. In writing the first sentence the child makes the capitals and punctuation marks, and if he is never allowed to make a form incorrectly, it will be almost impossible for him ever to write a sentence incorrectly—that is beginning it with a small letter, or not using the proper punctuation at the end. In writing the words, the child follows exactly the method of learning the spoken language. Spelling is the precise co-relative of pronunciation. The child hears the spoken word and strives to reproduce it by his voice. The child sees the written word, and reproduces it with his pencil. He gets the thought by means of the written word, and gives it back just as he gets it—he is talking with his pencil. He is ready to tell you any time, orally, what he is writing.

In the first three years' work, talking with the pencil may be used as a greater means of learning to read than all the books of supplementary reading. When the child writes the first word, the unity of all language teaching is begun. Getting thought and giving thought by spoken and written words should be united at the start, and grow through all future development as from one root.

What advantages have the blackboard and crayon over the chart and printed book in elementary reading? First, the words are created by the hand of the teacher before the eyes of the children, as the spoken word is created. Second, the word is written alone in large letters, separated from all other objects of interest except the object it names. How different the confused mass of black specks upon the printed page. Third, the attention of the little group is thus directed to one object in a very simple manner. Fourth, words are learned by *repeated* acts of association. The great fault with charts and primers is that they do not repeat words times enough for the child to learn them. On the blackboard, on the other hand, these repetitions can be easily made. It is of great importance that the first one hundred words should be learned thoroughly. Superficial work is always bad work. From the first, then, the child should write every word he learns from the blackboard, and just as soon as he is able to write sentences the word should invariably be written in sentences.

The child should be trained to read from his slate all that he writes. The reason why the change is made so easily from script to print used to puzzle me. I only knew that it could be done, but could not tell the reason why. Script and print are very nearly allied in form. The first print was a crude reproduction of old manuscript. Both, indeed, have changed since the art of printing was discovered, but the resemblance remains. The child, as you know, has a wonderful power of seeing resemblances. Like comes to like in his mind because his mental pictures are not filled out with that which produces the differences. This, to my mind, is sufficient reason for the surprising ease with which the child changes from script to print.

(To be continued.)

THE TEACHING PROFESSION.

It is interesting to note at this season of the year, when school boards are advertising for teachers, the smallness of the salary offered in a large proportion of the schools. The rate at which the teacher's services are remunerated is a sure index to the status of his profession in the public estimation, and tested by it that status is not yet in the eyes of the people of Ontario very high. And this conclusion is confirmed by other indications, which are too familiar to require enumeration here. An honest effort on the part of those most directly interested in this state of affairs to estimate its evil effects and ascertain the true remedy can hardly fail to be productive of good.

The effects are patent to the most superficial observer. Because it is not worth a teacher's while to stay in his profession he leaves it as soon as he can for something else. Some take to farming, some to mercantile life, some to the insurance business, some to the so-called learned professions, not one of which has any better title to the epithet than the one that is abandoned. Its inevitable consequence is that the ranks of the teaching body are filled up very largely with inexperienced recruits, and very largely with those who lack either the energy or the ability to better their posi-

tions. That there are always to be found many able and self-sacrificing teachers we all know, but it is greatly to be regretted that the recruits and the drones are so numerous as they are.

This is one evil flowing directly from the low estimate put on the profession by the public. Another is the frequency with which teachers are changed in schools. Very few school boards adopt the plan of providing residences which they could easily do, and therefore the great majority of even married teachers are birds of passage, ready to take the wing whenever a favorable opportunity offers. The injurious effect of this tendency on both the schools and the teachers might be indefinitely lessened by providing rent-free residences for the teacher, and engaging him for several years instead of one. It is hardly necessary to add that the remedy can be made thoroughly effective only by paying decently liberal salaries.

The teachers have in their own hands to some extent the means of remedying the evils of which they justly complain. They have excellent facilities for co-operation, and there is no reason why co-operation should not be as effective in bettering their condition as it has been in bettering that of mechancis. Questions of salary, residence, and length of engagements are proper subjects for discussion in teacher's conventions, and though the members of the profession cannot by their deliberations and resolutions compel the taxpayers to be more liberal, they can improve their own *esprit de corps* and arrive at the best means of improving and enlightening public opinion.

They can do more even than this. The collective expressions of the opinions of teachers have always, and properly, had a great deal of influence with the education department, and the right to legislate in several matters which have an intimate relation to the teacher's status is vested in that body. We need not refer here to more than one of these matters—the qualification prescribed for entrance into the profession.

A great improvement has been made in this connection during the past few years. It is now impossible for a person to become a teacher without having had some professional training. But the time has come for making another advance. Attendance for a single brief session at a county model school is not enough. That period of preparation and probation should be greatly lengthened in the interest no less of the schools than of the teachers. It is still to a great extent the case that the teacher gains his professional skill and experience at the expense of the children on whom he operates, when he should be compelled to gain them more largely at his own. By judiciously increasing the difficulty of entering into the profession its standard may be indefinitely raised, and there is little reason to doubt that by unanimous and persistent efforts the teachers of this province can secure this wise reform.—*Toronto World.*

NEW METHODS.

BY WILLIAM T. HARRIS.

I wish to offer a few words on some of the "new methods" in vogue. The reform of the reading-lesson through "Supplementary Reading" is one that I find most liable to abuse. Many teachers have been in the habit of conducting the lesson in reading as a mere test of the pupil's acquired ability to read at sight, and not as a means of instructing the pupil how to read well. They have accordingly given the child no lesson to study and prepare for the recitation, but have kept the reading-book away from him until the hour of actual trial. Then the books are suddenly placed in the hands of the pupils, and they are expected to "read at sight." They read what they have not studied nor seen before. The books, too, are not carried home by the pupils to be read in the family, nor are they studied by the pupil at school.

Only one step further could be taken in this direction, namely, entirely to abolish instruction in reading, and expect the pupil to read newspapers and books "at sight" whenever he may have occasion to do so in after-life.

I think it is clear enough that reading resembles any other branch of instruction, and is to be learned by *study*, and study, too, on the part of the pupil. The teacher must teach pupils self-help. Unless something is given for the pupil to prepare in reading, the teacher can not hold him responsible for results, and we have simply what is called a "pouring-in" process, or the old-fashioned, long since discarded habit of "reading round," which was a mere calling of words and a correction of pronunciation.

And yet "Supplementary Reading" has a place in a proper course of study. Each teacher should be furnished with a dozen copies each of three or four volumes of selections from the best of classic authors—the selections being made from what is most attractive to children. These should be loaned for home reading to those pupils who prove that they have time to spare for supplementary reading by learning well the regular lessons assigned them in school. Such books of good literature and history are likely to be read at home not only by the pupils, but by the parents and older brothers and sisters, and thus accomplish manifold good. When the set of books in one room is pretty well finished by the pupils in that room, exchanges may be made with the next room and different authors may thus be obtained.

One great object of the school in our time is to teach the pupil how to use books—how to get out for himself what there is for him in the printed page. The man who cannot use books in our day has not learned the lesson of self-help, and the wisdom of the race is not likely to become his. He will not find, in this busy age, people who can afford to stop and tell him by oral instruction what he ought to be able to find out for himself by the use of the library that may be within his reach.

Oral instruction, except as an auxiliary to the text-book—except as an incitement to the pupil's interest and a guide to his self-activity and independent investigation in the preparation of his next lesson—is a great waste of the teacher's energy and an injury to the pupil. The pupil acquires a habit of expecting to be amused rather than a habit of work and a relish for independent investigation. The most important investigation that man ever learns to conduct is the habit of learning by industrious reading what his fellow-men have seen and thought. Secondary to this is the originality that adds something new to the stock of ideas and experiences of the race. The pupil who has not learned yet what the human race have found to be reasonable is not likely to add anything positive to the sum total of human knowledge, although he will certainly be likely to increase the negative knowledge by adding a new example of folly and failure.

The first thing in education, therefore, is the acquirement of the experience of the world, in order that the pupil may not start anew at the bottom of the hill, but may begin with a goodly share of the results of the work of his race.

I find, therefore, in these considerations the justification for the action of your committee, by which you have required the pupils to own their reading-books, and study them as they study other lessons. I would recommend, however, that a certain sum, not less than five dollars each year per room, be appropriated for books of supplementary reading, to be loaned under the strict supervision of the teacher, to pupils who show ability in regular school-work to profit by such books. It would be understood, of course, that the books of one room are to be exchanged gradually for the books of another room, as circumstances require.—*Report to School Committee, Concord, Massachusetts, 1883.*

DUTY.*

A German philosopher has said "the two most beautiful things in the universe are the starry heavens above and the sentiment of duty in the human soul;" and could he have chosen from the universe a more fitting creation to place side by side in the scales with this divinely given guiding power than the starry heavens in their beauty, grandeur, sublimity and incomprehensibility. To many this word "duty" appears harsh and pictures to their minds unpleasant associations; to these, instead of being a soul inspiring word encouraging them to press on in its pathway to reach the bright goal at its farther end, and coloring their daily life with all that is good and noble, it is a hard task master whose demands they justify themselves in neglecting and ignoring as did the unprofitable servant in the parable. They regard it as a whip to keep the coward in track, whose lash they are determined to escape, rather than as an ennobling principle to guide and regulate their daily life. They forget that it is the solid and beaten road on which one may travel safely, and in straying from its straight course they are entering unknown and uncertain paths which will sooner or later lead them into wildernesses of trouble and sin. Of some of these pleasure is the watchword substituted for duty—not that duty forbids pleasure; on the contrary, pleasure is never so sweet as when enjoyed in accordance with the dictates of this monitor. If they limited their pleasures and enjoyments to those that would not interfere with the performance of their duties, they would find that their capabilities for enjoyment would be increased ten-fold. Others neglect duty from indolence; rather than exert themselves they let golden opportunities pass, and turn out of the true way to escape difficulties they ought to overcome. But whatever be the excuses with which they seek to hide their shortcomings, the fact that they are surrounded by obligations to themselves, others, and their Creator remains unchanged. Man is born into the world to perform an allotted work—he will either leave the world better or worse—from the cradle to the grave his one straight path, following and struggling manfully in which he will finally stand at the close of his life's toil a conqueror worthy to receive the reward of victory which awaits him. No matter whether destiny has elevated him to a throne, placed him in the archbishop's chair, or led him along the more obscure paths of life—on board the man of war, in the mechanics' workshop or behind the plough, his path of duty is mapped out and a life's work waits a stout heart and willing hand. All are needed to fill their *role* in the grand onward march and progress of humanity, and indeed the noblest and truest men have often walked quietly along the humblest paths, fulfilling the duties of their station from purer motives than many of our greatest heroes, whose faltering foot-steps are often steadied and quickened by the consciousness that the eyes of a world are upon them. Truly in the daily routine of life, its trivial duties seem to us small items and we would fain neglect the little things because of this insignificance, but should we reflect that the little word "duty" hallows each act and throws a halo around the monotonous round, the thought would inspire us to renewed effort to perform the smallest offices faithfully. But its pathway is not strewn with pebbles only, nor all its walks lined with flowers; there are difficulties like huge boulders in the way, and these must be overcome, and trials mingle like thistles with its roses and these must be endured. If the minor details require constant watchfulness and perseverance, the great acts call forth moral courage and steady determination, which will perfect and beautify the character of the happy possessor. Duty often means a decision between right and wrong: in these cases pause, and having clearly decided what is right—that do independent of difficulties or obstacles. Duty comes home to us in manifold forms—duties lie on every hand but all may be embraced under two grand heads, social and religious—our duties to ourselves and others, and our duty to the Creator and Preserver of all mankind, or as the catechism has so admirably put it, our duty to God and to our neighbor. In the ten commandments we have a divine code of law which clearly defines these duties. Social duties are numerous and we can only regulate them by references to our sphere in life. We must not live for self. The very fact that God has planted in our hearts such reverence and loyalty to family ties establishes this clearly. All the world abhors a thoroughly selfish man. Why is the word "miser" pronounced with so much pity and shrinking contempt. With pity we reflect what a vast wealth of happiness he loses by hoarding all for himself, and with contempt when the dark side of the picture of what his nature, bound up in himself, must reveal passes through our minds. Again with what a shudder we fancy ourselves shut out from society as the lonely hermit. We would not change places with him for worlds—no social advantages are too vividly real to us, and, if we really feel this, we ought to contribute all in our power to make these privileges and pleasures more valuable. These several duties beginning at personal obligations as the centre, form an ever widening spiral. Our habits, culture, and conversation not only influence and color our actions but they affect the tone of society in which we move. God has given us talents and abilities. We are required to cultivate these and render an account of our stewardship according as we have used them to improve ourselves and benefit those around us. Next after self come the family ties and relations, and duties, like charity, should begin at home. Around the family groups, our friends and acquaintances, and among these we are called to fulfil the requirements the world expects from us in that circle known as society. The hand of brotherhood between man and man inspires him to acts of self-sacrifice, and writes among the daily news, items of heroism which touch our hearts and thrill our souls with reverence and admiration. The courageous mortal who rushes into the burning building and saves the life of his perishing brothers, or launches his boat upon the raging sea, and in the face of the frowning tempest rescues his drowning fellow creatures, acts from this inspiring motive. His duty to his fellow man came home to him and as a mainspring animated the act. He did not, as Cain, stop to answer to the voice, "Am I my brother's keeper"—no, he knew his duty and hesitated not to perform it. This universal tie appeals to our inner natures where lies this hidden spark to be ever ready as then to offer up ourselves for our brother's need—be it physical, moral, or spiritual. Will we, like cowards, drown the voice of this monitor and dull the finest sense in our natures rather than overcome difficulties, and sacrifice our paltry pleasures for our neighbor's temporal or eternal welfare. Forming an outside ring as a guard and boundary lies our duty to our country, its liberties and laws. Heroes in their country's cause have lighted the pages of history since the world began. Hear that noble Roman, after he has sacrificed his best friend for his country, exclaim "I have the same dagger for myself when it shall please my country to need my death." Watch Oliver Cromwell struggling with difficulties at home and abroad and meeting the exigencies of his trying position with calm fortitude, buoyed up with a consciousness of his duty. Coming nearer our own day see that brave lad leave the shelter of his home and devote his life and energies to his country. View Washington's life from the time he bade farewell to his aged mother and entered the battlefield, till an orphan nation laid him sorrowing in the grave. What has kept its well filled pages so unsullied, prompted the noble acts and inspired the brave deeds?—

*An essay read before the West Bruce Teachers' Association by Miss E. Lucretia Powell, and published at their request.

an honest conviction of duty has been the moving power. It has sustained his footsteps through the trials and troubles of many years' warfare. It weaves its golden thread through his term of presidency and flashes forth in all its brilliancy when he steps down to preserve the constitution he has established. Ambition formed no factor here—the path of duty led up to an earthly pinnacle. This hero pursued his course steadily. Visions of his country's glorious future shut out of his mind all aspirations after personal greatness and he died the ideal of many, the hero of all. He had walked in the footsteps of this divine guide; and view the close of his life's toil, how unlike ambition's devotees ! Think over those last years of honor and contentment, while he, having finished his work, waited his call home. Then pass before our minds the closing scenes in the life's struggle of some when ambition ruled. See Cæsar bleeding at the base of Pompey's statue; Wolsey (?) walking crowned with shame and dishonor to the scaffold, and Napoleon pining with grief and remorse on lonely St. Helena's isle. But the social list would not be complete without a consideration of official duties. This division may not affect as large a class as the others, but, to those it does affect its demands are even more arbitrary. If we regard duty as a sacred obligation in our private relations surely when we make it doubly binding, when we accept positions of responsibility and trust, we will make it our first consideration to perform these duties faithfully, and conscientiously. And here as teachers we have a two-fold responsibility resting upon us in our social and official relations to pupils and parents. Not only will neglect of official duties be a weakening of our moral forces, a stain upon our integrity, a lasting injury and loss to our pupils, but positive wrong to the noble work in which we are engaged. The world every day has enough examples of those who, occupying positions of responsibility and emolument, take advantage of the privileges of their positions to consult their ease and personal interests; who fill their tills with coins from the public treasury, and neglect the very duties which alone would entitle them to the remuneration they pocket without any adequate return, without our profession adding to the ranks. If we consider it criminal for those in high positions, remember that the insignificance of our duties in comparison will not pardon our neglect, but rather condemn us. Some consider neglect of duty, so long as they still manage to draw their pay, as rather a clever device. What an inferior position they give this sentiment of duty ! Where are their principles, their love of truth, their abhorrence of dishonesty ? But leaving moral principles and looking at it from a strictly business point of view, neglect of duty will lead to failure and ruin. Our successful business men, bravest warriors, best generals, cleverest professors and greatest statesmen, all will testify to the fact that perseverance alone will win the day.

After omission of duty comes the commission of sin. In duty's path lie all the virtues; once outside its course the poor victim is besieged with the vices and started on the downward road. Others there are who though faithful in the ordinary course of business flee at the approach of danger. For the rebuke of such point to brave John Maynard who singed and burned at the wheel. Ask them to watch that captain on the sinking vessel issue every order, give each command, and, still at his post, sink with the ruined wreck. Life is short; death is certain; it comes to all; then let our earnest prayer be that it may find us faithful at the wheel.

Then our religious duties—the love, reverence, and devotion we owe to Him who created and preserves us, who has implanted in our natures this strong sense, are a rudder to steer us over the rough and uncertain ocean of life, and guide us into the harbor of rest when the toils are over. As the sun and all the planets that revolve around it travel on through space, so man with all the attendant duties of his temporal life, moves onward to life eternal. We want, as never was wanted before, our forefathers' strong convictions of truth and duty to grapple with modern positivism, naturalism and agnosticism. Mankind to-day needs the spirit which inspired the Apostle Paul to assert and stand by right even to death; the steadfastness of the host of martyrs who endured all the tortures of the rack and horrors of the stake for right and duty. Would we model our lives after the life of Him who is perfect, who left his glory above, came to earth, endured the cross and shame to do his Father's will, then we must follow in this pathway, this heavenly voice must be our guide. May we, thoroughly convinced of the grandeur and sublimity of this sentiment in the human soul, exclaim with Wordsworth in his "Ode to duty,"

> I myself commend unto thy guidance from this hour;
> Oh, let my weakness have an end!
> Give unto me, made lowly wise, the spirit of self sacrifice,
> The confidence of reason give;
> And in the light of truth thy bondman let me live.

THE PUBLIC SCHOOL SYSTEM OF ONTARIO.

BY DAVID ALLISON, LL.D., HALIFAX, N. S.

In an article under the above heading, written by his Lordship the Bishop of Niagara, and published in the *Globe* of February 9th, I find the following statements and expressions of opinion: –

"I was a Superintendent of common schools for the Township of Thorne, when such officers were first appointed, more than thirty years ago, and I can testify that the pupils in our common schools of those days could spell, read, write, cipher, and understood geography better than they do now. It is true they had not so many different things to study as they now have; they had by no means so many 'ologies to study as they now have. But they had more time to study those things which are good and necessary for them. They were not so crammed with a dozen subjects as they now are, but what they learned they learned well, and did not forget in a week; and the common school education of those days did not cost the people of the country one-fifth of what it now costs them, taking into account the Minister of Education, with his handsome salary, the county Inspectors, the well remunerated school teachers, very expensive buildings, the very costly books, apparatus, maps, etc., required now.

. . . . . .

"The whole tendency, in short, of the educational system in vogue in the States—the same thing is true of that in Ontario—is to develop institutions essentially aristocratic, in which are sacrificed to a great extent the interests of the many, for the sake of unnaturally and unjustifiably "coaching forward" the few. An illustration of this truth was given a few years ago in one of our large thriving towns. A butcher's apprentice had served out his time, and his master wanted to supply his place, advertised for a fortnight before his advertisement was answered. About the same time a third-class teacher was required in one of the numerous schools of the town, and an advertisement brought out 59 applicants in two days. Now this difficulty of finding a lad to learn this respectable and profitable business was not that there were no lads in the town and in the surrounding country who were not by nature and constitution fitted for this business, but they had been spoiled for it, they had had their heads filled with too many 'ologies and their minds filled with the idea that manual labor was degrading, and that they should aim at something higher than to be a butcher.

. . . . . .

"Should we, then, foster a system at an enormous expense to the country, which not only, on your confession, does not impart the education which the country wants, but actually unfits the sons of the artisans of our towns and cities, and the sons of the farmers, too, as I hope to show in another letter, for walking in their fathers' honorable steps, but fills them with the idea of living easy lives by becoming professional men, or, if they cannot become such, by becoming merchants, with the pretty certain prospect of following the 95 out of every 100 of their predecessors by going into bankruptcy and pulling their parents down into want and misery too? I have materials, consisting of public documents, articles from the United States, showing what have been the fruits of the system in that country, and shall be glad to follow up this letter with one or more on the same subject, thanking you for your courtesy in giving me the use of your columns."

The learned prelate also quotes approvingly from an editorial article which appeared in the *Globe* of January 29th, and from a recent essay in the *North American Review*, certain passages which more or less strongly condemn an asserted tendency in modern educational methods towards slipshod haste and superficial expansion. These passages the reverend writer proceeds to endorse, amplify, annotate, and specifically apply to the condition of his own Province, E. g. (referring to the *Globe* article) he says :

" Again you say with equal justice :—

'In order to live an honest and independent life it is needed that a child should at any rate be well grounded in the rudiments of a good English education, should, at least, be considered master of the three R's. A great many of the graduates of even "high schools," both in the States and in Canada, are not that length to-day ; a smattering of a hundred things which they have is but poor compensation for this lack.'"

It would be in a high degree presumptuous and impertinent for one living nearly a thousand miles from the nearest point of Ontario, to assume that her arranged system of education lacks native defenders. I shall not even assume that present circumstances require any defence at all. But I may be permitted to call attention to what the reverend writer really asks us to believe :—

1. That the common school *teachers* of thirty years ago were superior to those of to-day. This is a necessary inference, for if pupils in "those days could spell, read, write, cipher, and understood geography better than they do now" they must have been better taught. But who *can* believe this ?

2. In close connection with the foregoing, that the work of normal training for the past thirty years has been worse than useless. If the lame and halt and blind and intemperate, who once constituted the main teaching staff of all our Provinces, achieved such grand results in the all sufficient "three R's," while keeping the schools free from those most reprehensible "'ologies," Ontario had better close up the normal schools, and, "the sooner the better."

3. That the position of apprentice to a butcher is a more useful, if not a more honorable, calling than that of a school teacher.

4. That our educational system is defective in proportion as it inspires youth enjoying its privileges with an ambition to rise from the position in which they have been "necessarily placed."

5. That institutions to which all are admitted on equal terms and which have been the gateway to fame and future, for thousands of the children of the lowly are "essentially aristocratic."

6. That the somewhat prevalent idea, that Ontario has an educational system of which she may justly be proud is entirely unwarranted, and that the eulogies bestowed upon it by every intelligent foreigner who has investigated it, have been founded on mere hallucination.

The *Schoolmaster* is right when it says, speaking of the phrase, "The New Education," and the "high relish with which it is used in some quarters," that "it has the indecorous swagger of a patent medicine. About the term, and what it is made to imply to the unsophisticated, there is a decided flavor of quackery." "The evil of this phrase," again says the *Schoolmaster*, "lies in the fact that it turns the gaze from the individual teacher and her personal power, and sets it in search of something outside of her, and which, in fact, does not exist. For the mass of teachers, as well as of mankind in general, education is not, to-day, a question of philosophy or principles. These were long ago established."

Education is twofold. First, it consists in the acquirement of information which is generally called learning; such as language, spoken and written; facts in the ordinary events around us; facts of trade, of history, of geography, of arithmetic. Second, in the training of the physical powers and the intellectual faculties; strengthening and enlarging them till they have the power of using these facts to aid in the successful accomplishment of the ordinary work of life. This training is sometime called discipline. An educated person may be compared to a mason standing beside a pile of bricks. The bricks are the facts, the mason is the physical force picking up the facts one by one, and the intellectual power is guiding him as he skilfully welds them into a solid wall. The building which he constructs is the work of life.—*C. J. Fiatt.*

Examination Papers.

ADMISSION TO HIGH SCHOOLS, DECEMBER, 1883.

GEOGRAPHY.

1. Define—Latitude, Parallel of Latitude, Meridian, Peninsula, Lake, Water-shed, River-basin, Tide, Limited Monarchy, Republic.
2. Give the names and positions of the more important British possessions.
3. Name the Countries of Europe and their Capitals, and the River on which each Capital is situated.
4. Name the Countries, Capes, River-mouths, and Islands you would pass, and the waters you would pass through, in a coasting voyage from Halifax to Rio Janeiro.
5. What are the chief manufactures, the chief exports, and the chief imports of Canada ?
6. Draw an outline map of Canada, marking its Capital, the boundaries of each Province, and the Capital of each.

Values—1, 10 ; 2, 12 ; 3, 18 ; 4, 10 ; 5, 10 ; 6, 12.

COMPOSITION.

1. Punctuate the following, dividing it correctly into sentences, and, when proper, substitute pronouns for nouns :—

A wolf roving about in search of food passed by a hut where a a child was crying nothwithstanding that the child's mother did the mother's best to quiet the child as the wolf stood listening the wolf heard the mother chiding the child and threatening to throw the child to the wolf so thinking the mother would be as good as the mother's own word the wolf hung about the hut licking the wolf's own lips in the joyful expectation of a capital supper towards evening when the child had become quiet the wolf heard the mother praising the child saying that if the wolf came for the child the wolf should be beaten to death off the wolf trotted home as fast as the wolf's legs could carry him.

2. Combine the following into *two* complete sentences, at the same time substituting pronouns for nouns, when proper :—

An ass found a lion's skin. The ass put the lion's skin on. The ass went into the woods and pastures. The flocks and herds were thrown into consternation by the ass. The ass then met the owner of the ass. The ass would have frightened the ass's owner. The good man, however, saw the long ears of the ass sticking out. The owner thus knew the ass. The owner had a good cudgel. The owner made the ass sensible that though the ass was dressed in a lion's skin, the ass was really no more than an ass.

3. Write a short composition on "A Spade."
4. Write a letter to your mother, describing a visit to your uncle's.

Values—1, 16 ; 2, 16 ; 3, 20 ; 4, 20.

DRAWING.

Twelve marks for each question.

1. Draw a cross from the following dictation :—Draw a square in dotted outline, and by dotted lines divide it into nine equal smaller squares. Divide each side of the innermost square into halves. In each corner square draw a diagonal with its side to the centre of the large square. From each end of each of these diagonals draw a straight line to the nearest point of division on the sides of the inner square.

2. Draw a right-line moulding from the following dictation :—Draw two horizontal lines four inches long and one inch apart. Divide the intervening space into squares and draw their diagonals. Divide each half diagonal into two equal parts and join the points of division, so as to form smaller squares on the same diagonals as the larger ones. Add a horizontal line above and another below.

3. Draw a wheel from the following dictation :—Draw a square and its diameters and diagonals, all in dotted outline, and inscribe in the square a circle in unbroken line. Divide the semi-diameters of the circle into quarters, and through the outer ends of the first and of the third quarters draw, in full line, circles concentric with the first drawn one. Draw full-lined the portions of the diameters and diagonals between the innermost and the middle circle.

4. Draw the outline of a cube.
5. Draw the outline of a pick-axe.

ENGLISH GRAMMAR.

"The *almond* blossoms *on the tree,*
As emblems of thy charms *were made;*
The flowers of life, my *sweet, like thee;*
Yet *ere* the Summer *is gone,* they fade."

1. (*a*) Analyze the first three lines of this stanza.
(*b*) Parse the words that are printed in italics.

2. Name four classes of adjectives that do not admit of comparison.

3. Write the second person singular of each tense in the indicative mood, passive voice, of the verb *strike*, using the common form.

4. Make a list of four words that are used sometimes as one part of speech, and sometimes as another. Quote or make examples to illustrate your answer.

5. Correct the following sentences, where necessary :—
(*a*) Many people never learns to speak correct.
(*b*) James is more diligent than thee and your brother.
(*c*) Neither his conduct or his language have left me with that impression.
(*d*) Exactly opposite to each other stands a church and a gin palace.
(*e*) He had not ought to do that, because it ain't no use.
(*f*) What you must rely on is facts.
(*g*) It has not rained last week or this week.
(*h*) He turned away with the utmost contempt that he was capable of.
(*i*) They returned back again to the city from whence they came forth.
(*k*) On a sudden off breaks a limb and down tumbles both negro and racoon.
(*l*) The beaux in those days painted their faces as well as the ladies.
(*m*) When he has went I will let you know at once.

Values—1, (*a*) 6, (*b*) 26 ; 2, 4 ; 3, 6 ; 4, 12 ; 5, 46.

DICTATION.

NOTE—*The Presiding Examiner will read the passage three times; the first time to enable the Candidate to collect the sense ; the second, slowly, to enable the Candidates to write down the words ; and the third, for review.*

VALUE—22.

Two marks to be deducted for each word mis spelled.

These internal arrangements are so various and so complicated that pages of description might be written thereupon. There are myriads of rooms, cells, nurseries, provision-chambers, guard-rooms, passages, vaults, bridges, subterranean streets and canals, tunnels, arched ways, steps, smooth inclines, domes, &c., all arranged in a definite, coherent and well-considered plan. In the middle of the building, sheltered as far as possible from outside dangers, lies the stately royal dwelling, resembling an arched oven, in which the royal pair reside, or rather are imprisoned, for the entrances and outlets are so small that, although the workers on service can pass easily in and out, the queen cannot do so. Above and below the royal cell are the rooms of the workers and the soldiers that are specially charged with the care and defence of the royal pair.

SPELLING AND FOURTH BOOK.

NOTE—All Candidates must take questions 1 and 2 of the paper on Spelling and Fourth Book ; and as regards questions 3, 4, 5, 6, 7, each must select the series on which he will be examined, and confine himself to the set of questions based on the Fourth Book of that series. No answers can be considered that may be given on either of the series other than the one selected by the Candidate for the examination.

1. Distinguish—hail, hale ; whine, wine ; ascent, assent ; e'er, ere, air ; wax, whacks ; tracks, tracts ; wail, whale.

2. Accent the following words, and correct any errors in spelling :—secede, succede, decieve, wooddin, posthumous, ballance, allarm, combine.

Values—1, 7 ; 2, 8 ;

ONTARIO READERS.

3. Give the substance of the lesson entitled "The Voyage of the Golden Hind."

4. Xerxes, having lost in his last fight, together with 20,000 other soldiers and captains, two of his own brethren, began to doubt what inconvenience might befall him, by the virtue of such as had not been present at these battles, with whom he knew that he was shortly to deal. Especially of the Spartans he stood in great fear, whose manhood had appeared singular in this trial, which caused him very carefully to inquire what numbers they could bring into the field. It is reported of Dieneces, the Spartan, that when one thought to have terrified him by saying that the flight of the Persian arrows was so thick as to hide the sun, he answered thus : "It is very good news, for then shall we fight in the cool shade."

Explain—*captain, brethren, befall, virtue, he was shortly to deal, singular, bring into the field, thought to have terrified, flight of the Persian arrows.*

5. What is the subject of the lesson from which this passage is taken, and what is the name of its author ?

6. Write the emphatic words in the sentence commencing at 'Especially,' and concluding at 'field.'

7. Quote ten consecutive lines of poetry.

Values—3, 20 ; 4, 15 ; 5, 4 ; 6, 8 ; 7, 10.

ROYAL READERS.

3. Give the substance of the lesson entitled "Harold Skimpole."

4. Then was committed that great crime, memorable for its singular atrocity, memorable for the tremendous retribution by which it was followed. The English captives were left at the mercy of the guards, and the guards determined to secure them for the night in the prison of the garrison, a chamber known by the fearful name of the Black Hole. Even for a single European malefactor, that dungeon would, in such a climate, have been too close and narrow. The space was only twenty feet square. The air-holes were small and obstructed. It was the summer solstice, the season when the fierce heat of Bengal can scarcely be rendered tolerable to natives of England by lofty halls and by the constant waving of fans.

Explain—*singular atrocity, retribution, guards, garrison, malefactor, dungeon, air-holes, solstice, tolerable, lofty halls.*

5. What is the subject of the lesson from which this passage is taken, and what is the name of the author ?

6. Write the emphatic words in the sentence commencing at 'It was the summer,' and concluding at 'fans.'

7. Quote ten consecutive lines from any poem in the twelve selected lessons.

Values—3, 20 : 4, 15 ; 5, 4 ; 6, 8 ; 7, 10.

CANADIAN READERS.

3. Give the substance of the lesson entitled "The Taking of Roxburgh Castle."

4. The House of Commons is called upon to-night to fulfil a sorrowful, but a noble, duty. It has to recognize, in the face of the country, and of the civilized world, the loss of the most illustrious of our citizens, and to offer to the ashes of the great departed, the solemn anguish of a bereaved nation. The princely personage who has left us was born in an age more fertile of great events than any period of recorded time. Of those vast incidents the most conspicuous were his own deeds, and these were performed with the smallest means, and in defiance of the greatest obstacles.

Explain—*House of Commons, recognize, civilized world, illustrious, ashes of the great departed, solemn anguish, fertile of great events, recorded time, defiance, obstacles.*

5. Give the name of the speaker and the person spoken of in the above passage.

6. Write the emphatic words in the sentence commencing at '*Of those,*' and concluding at '*obstacles.*'

7. Quote ten consecutive lines from any poem in the eleven selected lessons.

Values—3, 20 ; 4, 15 ; 5, 4 ; 6, 8 ; 7, 10.

ENGLISH HISTORY.

Twelve marks for each question.

1. Who were the Saxons? What changes did their invasion make in England? What changes did the Norman conquest make?
2. Name a good king of England and also a bad one, and tell some things the former did that were good for the people, and some the latter did that were bad for them.
3. What were the chief events in the reign of Henry VIII?
4. What were the causes that led to the setting up of the Commonwealth?
5. What have been the chief events in the reign of Victoria?
6. Write short notes on any *four* of the following:—Magna Charta, Court of the Star Chamber, The Petition of Right, The Habeas Corpus Act, The Declaration of Rights, The Reform Bill.

THE DRY-ROT CODE.—We have been favored (says *Funny Folks*) with a copy of a Board school Inspector's report under the New Code, which is now agitating the Board school teachers all over the country. For obvious reasons we suppress the name of the school to which the report refers:—"As compared with the last two years, a falling off is to be noted in the results. The infants in arms are especially weak in the multiplication table, no less than fifteen failing in giving a correct answer to eleven times eleven. The explanation given that these fifteen were 'bottle' babies is scarcely satisfactory. Algebra still requires more attention in the two-year-olds. I have also to report that in one of the exercise books I found three carraway comfits, showing that the discipline is somewhat lax. The four-year infants appear to be well acquainted with the dimensions of the fifth space, but I should recommend a closer study of 'Newton's Principia.' I am sorry to report unfavorably of the physiology of the five-year-olds, several of whom failed to appreciate accurately the distinction between the interior medallary filaments and the ganglionic centres. The chemistry in the six-year boys was fairly good, but I regret that there seems to be some uncertainty as to the composition of such elementary combinations as chloride of ethylomethylamylophenylammonium. I am pleased to find that occupation has been found for the sixth standard boys—who have mastered every department of human knowledge—in slate-pencil sharpening drill. Out of fifty points I could only find one which differed to an appreciable extent (.000002 of an inch) from the standard. It is to be regretted that the number of boys drafted off to the Asylum for Idiots shows no decrease. To obviate this I should recommend a revision of the Code, which certainly requires to be made much more difficult and complicated than it now is."

"I WILL STAY."—In a Memphis graveyard is buried a young hero. He was a pilot on board a White River steamboat. The boat caught fire while he was at the wheel. Seeing that to land against the bluff bank opposite to the boat would cause the loss of many lives, he headed the steamer for a sand-bar some distance away, where all could be saved. The flames came nearer and nearer the pilot-house. He was urged to fly, but answered, his hands grasping tighter the spokes of the wheel: "I will not go. If I go nobody will be saved; if I stay, no one will be lost but me, I will stay." And he stood by the wheel till the boat grounded in the shallow water on the bar. The flames had closed around the pilot-house, and in escaping through them he was fatally burned. Of the two hundred persons on board, his was the only life lost. "The history of Mississippi piloting," says Mark Twain, in his "Life on the Mississippi," where he found this anecdote, "affords six or seven instances of this sort of martyrdom." "But," he continues, and the noble fact is worthy of the italics in which he puts it, "there is no instance of a pilot deserting his post to save his life, while by remaining and sacrificing it he might secure other lives from destruction.—*Youth's Companion.*

The law of the association of ideas is, as yet, as far from accomplishing those beneficent ends for which the Creator implanted it in the human mind, as steam was on the day when the Marquis of Worcester caught the idea of its power, from seeing it throw off the lid of a tea-kettle, and before Savery, Newcomen, Watt, and Fulton, made it dig coal, weave cloth, grind corn, and bring all nations and continents into one small neighborhood.—*Horace Mann.*

Practical Department.

PEDAGOGICS.

BY REV. J. B. SILCOX, WINNIPEG.

Perhaps I cannot introduce my theme better than by quoting a few passages from the chapter on Pedagogy in Sartor Resartus. Teufelsdroeckh says: "Of the insignificant portion of my education which depended on schools there need almost no notice be taken. I learned what others learned and kept it stored by in a corner of my head, seeing as yet no manner of use in it. My schoolmaster, a bent-down, broken-hearted, under-foot martyr, as others of that guild are, did little for me except discover that he could do little." And again he says: "My teachers were hide-bound pedants, without knowledge of man's nature or of boy's, or or of aught save their lexicons and quarterly account books." "Innumerable dead vocables they crammed into us and called it fostering the mind." When Teufelshroeckh passed up into the University he did not find things much better. "The Hinlerschlag professors," he says, "knew syntax enough, and of the human soul this much, that it had a faculty called memory and could be acted on by the muscular integrement by application of birch rods."

This criticism on old-time teachers and systems of teaching by Carlyle may be over severe when applied to present-day systems, but I am inclined to think that there is enough sober truth in it to command the serious attention of Educators. The criticism has force to-day. We are in the habit of eulogizing our educational system. We chant its praises on all possible occasions. With pride we point out the schoolhouse to the stranger or visitor. And yet it may be that our eyes, like lovers', are blinded to the radical fundamental defects of the much be-lauded institution, and the sharp stinging criticism of a grim Carlyle is needed to open our eyes and direct us to amendment.

There is in the minds of the thoughtful to-day a growing discontent with the results of our educational system. Thoughtful, practical, utilitarian men are questioning the usefulness of our public and high-school system. They are dissatisfied with the quality and the quantity of the fruit the tree yearly yields. The most radical critic would not cut the tree down as a cumberer of the ground, but they do not hesitate to speak of it disparagingly and say it gives a poor return for the labor and time and wealth bestowed upon it. There is reason for the affirmation that there is a great waste of energy and misdirection of effort in our much praised system of education. A successful business man not long since said, "I have sent my son to school for seventeen years: he has graduated with honor at one of our most noted universities, and now he does not know how to do anything." Another father testified his appreciation of the systems in vogue in this way. He said: "I put my son through the public school, high school, university, and now all I can say of him is what Aaron said in defence of his making an object of idolatrous worship for the people, 'I put in the gold and there came out this calf.'" A recent writer after reviewing the history of educational systems, says that schoolmasters are still spending their best energies in teaching subjects which have been universally condemned by educational reformers for the last 200 years. These criticisms outline the truth of thought on this subject in the minds of many to-day. They also indicate the direction of permanent practical reform. The signs of the times lead us to believe that the world in the days to come will have a more rational theory of education than it has had in the past. Chairs of education, where the science of education will be studied and taught, have recently been established in the Scottish Universities. In

Germany and in England the most eminent scholars are giving this subject their closest attention. As in every other science, so we may expect there will be progress in the science of education.

With all modesty let me venture to indicate the line along which progress will be made in the future. Let me draw attention to some facts which every true science of education must respect; some truths which every true science will incorporate.

In the first place, a true science of education must have a true and clear conception of the purpose or object of education. This is fundamental. This is what the premise of an argument is to the conclusion. If the premise is wrong the conclusion will never be right. If our theory of education be wrong our practice is not likely to be right. The successful pilot on the sea steers for a definite port. He knows where he wants to land his vessel. The man who builds and equips a mill, knows before-hand what he intends to accomplish. The structure he erects; the machinery he places in it; the men he employs are all selected under the governing idea or purpose in his mind to convert wheat into flour or logs into lumber as the case may be. What then should be the purpose or aim of the educator? What object is he to seek to attain? What is "the chief duty" of the schoolmaster? Am I right when I say that "the chief duty" of the educator is to stimulate and superintend the development of the inborn faculties of the child. His aim should be the complete and harmonious development of all the mysterious and manifold powers and faculties of man. The teacher is to seek the holiness, that is the wholeness, the perfection of the entire nature in harmony with the laws of its own being. Frœbel says however we may differ as to the manner and condition in which the first human being came into conscious existence, we are agreed in the fact that all subsequent human beings came into life at zero, and under certain fixed laws evolve into higher and more complex forms. There are these in this germinal form,—a physical nature, a mental nature, and a moral nature, and the business of the educator is to take this bundle of humanity and develop it by appropriate processes and influences into a full-orbed manhood. In this process of evolution from the lowest zero point to the highest result of physical, mental, and moral culture, every faculty and power of body, mind, and soul must have its needed stimulus and direction. The ideal of the true education is a perfected harmonious development of the whole nature.

It follows from this that a true science of education must be evolved from and built up on a true science of man. A knowledge of the physical nature of man, a knowledge of the various faculties of the mind of man, a knowledge of man's moral nature and of the dependence and subtle relations that exist between this trinity of existence—all this is fundamental to a true science of education. Teufelsdroeckh's declaration that his teachers were without knowledge of man's nature, or of boys', is a criticism that applies to many of the learned magnates who prepare the curriculum of study for our public schools and universities to-day. The teachers are not so much to blame as those who are over them and who prescribe the course of studies to be pursued. The teachers are no more responsible for the vicious system that environs them than preachers or teachers of morality are for the false system of theology that is imposed on them by their ecclasiastical authorities.

It is only a self-evident truth to say that a teacher, to succeed, must know something of the wonderful nature of the being he is seeking to develop. The artisan must know not only what he is seeking to make—whether it be a plough, a sword, or a watch, he must also know something of the nature of the material he is working on. Much more, it is necessary for the teacher to know something of the nature of the material he is working on and seeking to develop. If he does not, it is the blind leading the blind, and both will fall into the ditch. "Man, know thyself." Teacher, know thy scholar. What a wonderful creature is a child! Who can know it? We can analyze a mineral and determine its constituent elements, but who can analyze a being made under the laws of animal life and yet made in the image of God, made for a brief day of existence here, and made for an eternity of existence yonder. How true to nature is Emerson, when he says, "The great Pan of old, who was clothed in a leopard skin to signify the beautiful variety of things, and the firmament, his coat of stars, was but the representation of them. O rich and various man; thou palace of sight and sound, carrying in thy senses the morning and the night and the unfathomable galaxy; in thy brain the geometry of the city of God; in thy heart the bower of love and the realms of right and wrong! An individual man is a fruit which it cost all the foregoing ages to form and ripen."

A true system of education must recognize the fact that the child has a body, fearfully and wonderfully made, and that its mental condition and growth, and its development in morality, etc., probably depend very largely upon its full, healthy, physical development. We must purge our minds from all ascetic St. Simon Stylites' notions of humanity, and develop in its young a respect and reverence for their own bodies. Encourage all games and exercises that tend to develop the body in strength, and grace, and beauty. Anatomy, physiology, and hygiene should surely have a place in the studies of every child.

Then again, a true system of education will recognize the fact that nine-tenths of the human race have to earn their bread by daily toil. Those who are at the head of our educational institutions must give this fact more attention thad it has had in the past. This is a utilitarian age. Institutions, governments, schools, churches, are tested by their usefulness. Now there are not a few to-day who say that our schools instead of fitting the young for the practical duties of life, really unfits them. The criticism that practical men make upon our educational system is that the scholar goes out of the school with a distaste and disrespect for honest manual labor. The effort of thousands of young men who are flocking every year into the cities from the country is to get a living by their brains. It has been truly called "the crime of education," that its tendency is to educate the young away from productive labor. Too few are going to mother earth for a living. The noble profession of agriculture is falling into disrepute. The young skilful artisan or mechanic is looked upon with disrespect by mothers who have daughters eligible for marriage, but they will eagerly welcome to their parlors the white-handed young scribe or copying clerk in a down town office. The foundation of all living is productive manual labor. The forces of nature are continually at work converting dead inorganic matter into living organism to supply the wants of man and beast. So man must work continually, converting the native materials of wood, wool, and iron into that which will minister to his own and other's comforts and needs. The starting point, therefore, of all higher education is to educate youth to honest productive labor. Culture is not the first requisite. The ability to live an honest, healthful life; the ability to earn an honest livelihood is a greater necessity. It is more necessary that a girl should know how to cook a beefsteak, or make a digestible loaf of bread, than that she should know how to conjugate a Greek verb, or perform the last musical production on the piano. Bread-winning must always be the work of man, and every child should be taught the nobility of manual labor. And no more forceful criticism could be made on our school system than that it fails to fit the child for the practical business and work of live.

Emerson said something like this: "We send our boy to school, but the boys on the play-ground educate him."—*N. E. Journal of Education.*

ELEMENTARY TEACHING.

BY PROF. HUXLEY.

There are a great many people who imagine that elementary teaching might be properly carried out by teachers provided with only elementary knowledge. Let me assure you that that is the profoundest mistake in the world. There is nothing so difficult to do as to write a good elementary book, and there is nobody so hard to teach properly and well as people who know nothing about a subject. It involves that difficult process of knowing what you know so well that you can talk about it as you can talk about your ordinary business. A man can always talk about his own business. He can always make it plain ; but, if his knowledge is hearsay, he is afraid to go beyond what he has recollected and put it before those that are ignorant, in such a shape that they comprehend it. That is the way, to be a good elementary teacher. To teach the elements of any subject, requires most careful consideration if you are a master of the subject ; and if you are not a master of it, it is needful you should familiarize yourself with so much as you are called upon to teach—soak yourself in it, so to speak, until you know it as a part of your daily life and daily knowledge, and then you will be able to teach anybody. That is what I mean by practical teachers, and, although the deficiency is being remedied to a large extent, I think it is one which has existed from no fault of those who undertook to teach.—*Nature.*

SIX DEFECTS OF OUR SCHOOLS.

"Prominent among 'the chief defects in our system of public education,' in *large cities*, and the 'changes' needed there, though differing from the defects which are generally found in the towns and villages, are the following :

1. The scholars are treated too much '*en masse*,' because of the large number of pupils to a teacher.

2. Too much time and effort are given to secure results which are not valuable either educationally or practically.

3. Too much time is spent in mere manipulation and organization, as if order and system were the end in view, and not the means to an end.

4. Too frequent sacrifice of the *proper progress* of pupils through a course of study (presumably arranged to secure natural development and educational results in its successive stages) in order to equalize numbers in the different grades. This is a disadvantage alike to the bright, ambitious pupils, and the slow but faithful pupils. The former are forced up, to fill vacancies in higher grades, by skipping portions of the regular course of study, which are essential to good progress in higher classes. The latter become duller and often disheartened by too much repetition. They take the routine over again with newly-promoted pupils, after all the charm of novelty, so essential to children, has gone. They are often neglected ; because the teacher must be occupied, either in preparing the quick scholars for an extra promotion, or in helping those who are victims of such promotion to supply their lost links.

5. Too frequent changes of teachers, and consequent loss of moral influence over pupils and of that perception of their individual needs and peculiarities which makes discipline easy and natural.

6. Too much reliance upon artifical spurs to study. As is the teacher, so is the school. Where the teacher stimulates ambition to excel others to the '*highest* per cent.,' to be 'number one,' to sit in the 'first row,' to get 'an extra' by a bright remark,—this will be the ruling motive of the school."—*Miss Lucretia Crocker, of Boston Board of Supervisors.*

SCIENCE TEACHING IN TRAINING COLLEGES.

Mr. Sharpe's report on Training Colleges contains a lengthy section dealing with the present state of science teaching in those institutions. Apparently he is pleased but not satisfied with what he has seen in his visits of inspection. "The lectures on these subjects," he says, "are generally excellent, so far as I can judge from their conformity to good text-books, from the interest evinced by the students, and the success of the experiments. The apparatus also is in conformity with the rules approved by the Science department." There is, moreover, no complaint that the students are not successful in passing their examinations. It is nevertheless true that, at the last Christmas examination of male students in training colleges, one-fifth of those presented in science failed altogether, and less than seventeen per cent. obtained first classes. A great deal too much seems to have been expected of them in science subjects, when it is remembered what pressure there is of other work. At present only two hours a week can be devoted to attending lectures on each science, and not very much more to private study of the same subject. Such is the case in one college referred to in the report. What Mr. Sharpe, however, complains of is, not that the student is ignorant of the facts in his science, but that when he attemps to illustrate his own lessons by experiment, he too frequently fails, through want of practice in handling simple pieces of apparatus. The remedy proposed is that such students as show special aptitude should be put through a six weeks' course of practical work in some particular science, and receive a special certificate for it.

There is no doubt that this course would highly benefit those who were allowed to take it. No doubt it is very desirable that a schoolmaster should be well read and instructed in every science subject he undertakes to teach, and it is of enormous advantage to his class if he has skill and ingenuity in making up apparatus. But the requisite amount of knowledge and skill in a single subject is only to be obtained by long attention and practice. The Associate of the Royal School of Mines spends more than a year in gaining what is considered to be sufficient practical knowledge of physics to become a teacher of that branch of science ; while the unfortunate student in training is expected to do equally well, and, besides to be an adept at teaching the usual school subjects, to have a fair knowledge of his own language, to have worked up a tolerable smattering in Latin or French, or both, and to pass examinations in a few other odd subjects, such as mathematics, mental and moral science, and political economy. The Inspectors are not, as matters stand, nearly satisfied with the advance made in the subjects presented at the Certificate Examination. One "is struck with the general hopeless inability to face the analysis (of sentences) with any sort of intelligent notion of the meaning." "The greater number of papers do not come up to the standard of fair," says another, speaking of school management, and so on for the other subjects. In face of this, it is scarcely feasible that the college authorities should be able to give up six weeks entirely to practical science. Already four weeks are taken up by the practising schools, and thus nearly a third of the year would be disposed of before ordinary subjects could be touched.

For such a scheme to be possible, one year would have to be considered sufficient to finish off what may be called the general education of the ex-pupil teacher, and the second year employed in two or three special subjects, of which practical science might be one. But until pupil teachers are better instructed than at present this will not be advisable. One has only to glance over the reports of examiners to satisfy himself that by the end of one year the majority of students are not prepared to throw aside their English

work and take to higher flights. Neither would it appear to be advisable to extend the period of training beyond the present limit of two years. A third year's course, such as was allowed in the earlier days of training schoolmasters, only benefited a very few. It is only a few who could afford it, and they are not always the most fitted to receive it.

The proposal, indeed, suggests so many difficulties, that one is tempted to ask whether we ought not to be contented with the present *régime;* insisting as much as possible on demonstration by experiment on the part of the college instructor, but not attempting to make any further demand on the time of the already overburdened student in training. Men with any native ingenuity, and a sufficient knowledge of the laws underlying physical phenomena, will readily devise means of illustrating their lessons. What they have to teach is simple enough, and the necessary experiments are simple enough. Sufficient dexterity in manipulating can easily be acquired by any teacher who is worth his salt, at much less cost than loss of time in his two short years of training.—*The Schoolmaster (Eng.)*

TEACHERS; THEIR QUALIFICATIONS AND DUTIES.

Next in importance to self control, I would class the ability to maintain order in the school-room. Somebody has said, "There may be order without instruction, but there can be no instruction without order," and I know of no better way of expressing my own opinion on that subject. Besides, I consider it as much a part of the teacher's duty, to teach the children to *obey* as to teach them to read. Many children have no other restraint than that of the school-room, parents or guardians being either unable or unwilling to restrain them, and they grow to manhood and womanhood in constant antagonism with and rebellion against rightful authority. Consequently they, unprepared to yield a ready obedience to the laws of the land, grow from bad to worse, and sooner or later furnish a large share of the criminal and lawless classes of every community, simply for want of a little wholesome and necessary discipline and restraint in childhood and youth. Certainly, they who will not obey parent, guardian, or teacher, cannot be expected to readily obey the laws of the land.

Following ability to control, I would place ability to interest. To do this successfully will require a variety of attainments, many of them not mentioned in the statutes made and provided. In addition to a knowledge of those studies mentioned for certificates, I would say a general knowledge of history, ancient and modern, natural history, geology, and in fact, the greater variety of information, the greater the possibilities for instruction. Now I am aware that some people may well question, as to what direct benefit a knowledge of geology, natural history, etc., etc., might be to a teacher in one of our primary schools. Yet, if they will but stop and consider for a moment, they will readily see there is scarcely a day in the school year, but some lesson treats of beast, bird, fish, fowl, earth or water, and if the teacher knows no more of the subject than may be found in the lesson provided for the children, the chances are that the children will know even less, and that lesson will be a failure.

Perhaps I should not say failure, but it will partake very much of the nature of bread, alone, for dinner. The bread may be of the best, but taken alone will seem dry and unpalatable. How nicely a little good butter, judiciously applied, lubricates its passage into the stomach, and then kindles the fires to warm it up, and also heats the grand machine, which is, indeed, so "wonderfully made."

But, I can, perhaps, better illustrate in this way. I open a First Reader, and the first line I see reads "A fat hen. A big rat." Now you say that is a very plain case and needs no comment. Possibly! The teacher can doubtless, after a time, succeed in teaching the little ones to speak the words in exact imitation of the teacher's voice, accent and all. If I should say, they have been taught to *mimic* the teacher, how far wrong would I be? Suppose, however, instead of trying to teach the memory to retain the sounds and accents as used by the teacher, a little time be devoted to telling something about the habits, or particular descriptions of "a hen," and "a rat," drawing as much from the children as possible, the teacher supplying what they lack. How long will it be before the little eyes will begin to kindle with enthusiasm, and the little piping voices, each in its own individuality send out the words in all their completeness, with accents hardly to be improved? Does it never occur, that children talking, as a rule, give proper emphasis to the words they use? They may not use proper words, but there can be no mistaking their meaning by the emphasis placed upon their words.

And here I may say that the teacher's success will be proportioned to the ability to interest, and the ability to interest will be proportioned to the knowledge of the various subjects as they are presented for consideration. Of course, anybody can take a *great* occasion, or a *great* subject, and make a sensation. But unfortunately for the mass of the human family, great occasions are like angels' visits, "few and far between," and those who wait for them usually find not only the sere and yellow leaf of life, but even its withered branches, and still the coveted hour not come. So the teacher must learn to be great in the small things of everyday life.—*Supt. J. Hinson, Wis.*

PROGRAMME FOR TOWNSHIP INSTITUTES.

L. P. HARLAN, SUPT. MARION COUNTY, INDIANA.

1. *Methods of Instruction.* (1) *a* What determines method? *b* What are the sources of all primary ideas? *c* What faculties in the child are first developed? (2) Classification of methods, as—*a* The object-lesson method. *b* The illustrative method. *c* The Socratic method. *d* The authoritative method. (3) *a* At what stage in the child's advancement is each method applicable? *b* To what different subjects are different methods adapted? *c* The combination of methods in one recitation, etc. Discussion by Institute.

2. *Reading*—Continued. (1) Reading as related to the intellect. *a* The meaning of words. *b* The form and construction of sentences. *c* The marks of punctuation. *d* The figures of composition. In this connection prepare an outline of topics, the answers to which will indicate a preparation of the lesson. (2) What means can the teacher adopt to excite the emotions of the pupil so that he may experience the feeling of the writer? (3) Methods in teaching delivery. *a* Expression—Imitation; rules to be followed; laws of taste. *b* Posture—Easy to himself; graceful. *c* Gesture—Those which assist in expression. Discussion.

3. *Arithmetic*—Continued. *a* How impart the idea of a fraction? Exercises in fractional expressions. Kinds of fractions by induction. Show from board, method of conducting operations in addition, subtraction, multiplication, and division of fractions. Illustrate form of board-work required of pupil, and write out the model of the explanation required, etc. Discussion.

4. *Penmanship.*—*a* Organization of school into classes; necessary materials; instruction in position and manner of holding pen; grouping small letters; analysis of letters by groups; criticism of copy-books. Show Institute your method of teaching the subject, using the blackboard in your analysis. Discussion.

5. *The Recitation*—*a* The object to be reached directly and indirectly by the recitation. *b* The essentials of a well managed recitation. *c* Rules or points to be observed in conducting a recitation. *d* Reviews; their scope and frequency, etc. Discussion.

6. *Biographical Sketch.*— Subject to be selected by the writer.

7. *Elementary Grammar.*—(1) The parts of speech. *a* The noun. *b* Classes of nouns. *c* Written exercises in distinguishing one from the other. Show from the board how the properties of nouns may be taught inductively.

(2) Quotation marks.
(3) Abbreviations.
(4) Contractions, etc.
} Examples under each. Discussion.

8. *Offences—Punishments.*—(1) Kinds of offences, such as careless, unintentional acts, or deliberate offences. (2) Means of preventing offences, i. e., such as employment, parental co-operation, and punishments. (3) The objects and kinds of punishments, etc. (4) Write out and give to the Institute ten rules which should govern the teacher in his conduct toward the school. Discussion.

9. *Literary Exercises.*—Oration, public reading, declamation, or other literary work. Adjournment.

By order of the Board of Education.

Indiana School Journal.

TEACHERS' INSTITUTES.

What sort of institutes are the most productive of good to the teacher, the one week institute consisting of lectures, or the four weeks' institute which is a short-term normal school? This is one of the "live topics" upon which teachers should think and come to a conclusion. The original idea was to bring a normal school to the very doors of the teacher. Is not the feeling growing among teachers that it does not pay them to assemble for one week? It seems plain to us that (1) the teachers should be graded into four classes, three undergratuate classes, so to speak, and one holding life certificates. (2) That the undergraduate teacher should receive instruction in a graded institute, the third or lowest class getting about what pupils get in the lowest class in a normal school; that having finished the lowest class he should have a certificate to that effect, which should also authorize him to teach for one year; that this certificate should not be renewed, but, on its expiration, the teacher should be required to go into the second class, and upon finishing that, should have a certificate to that effect, which should also authorize him to teach for two years; this certificate should not be renewed, but on its expiration the teacher should be required to go into the first class of the institute, and upon finishing this should have a certificate good for three years, not renewable. He would now be able to enter the highest class in the normal school and obtain a life certificate, and be examined no more.

Too many institutes hold a mass meeting. Let them follow the plan of the graded school; give a due amount of instruction, and fit for a higher grade. As it now is, normal school graduates, life-certificate holders and country school graduates, the green hands and the experienced, are all mingled together.

The plan of devoting a part of each session of the teachers' institute or teachers' association to witnessing a teacher at work will, in a short time, be widely adopted. It was urged several years ago in the *Journal*. It was tried with fear and trembling, it was found to have excellent results, and it has been followed in many institutes this summer.

The plan is to bring in a class of children and place them on the platform in full view of the institute. A member of the institute, usually, volunteers to teach reading for example, and she conducts her work to the best of her ability. This being over, discussion follows. The institute conductor now assumes charge, and if he is an able man much good will result. It is often the case however, we must confess, that the discussion is a profitless criticism. It too much resembles the criticisms that some teacher allow when a pupil has read a selection. "Raised the voice at the end," "Didn't stop at a comma," "Read too fast," etc, etc.

It is nice work to criticise a teacher; few can do it well. Only those who know what *teaching* really is, and this few may claim. The criticism comes best from the conductor; he may ask questions of the institute. Before the teachers can criticise they must clearly understand what the exercise in reading given by the class was meant to be. It is an attempt at a conveyance of ideas or thoughts. Then they must clearly conceive how those ideas or thoughts are conveyed. A discussion of those two points will take several days.

The plan ought to become general. As usual the West leads off in this matter, though Canada is not behind. Let us hear from conductors on this "new departure."

New York School Journal.

THE EFFECTS OF ALCOHOLIC DRINKS, NARCOTICS, AND STIMULANTS.

I. Alcohol.

1. Its origin:
   a. Fermentation; *b.* Distillation.
2. Its source:
   a. Fruit juice; *b.* Grains.
   c. Starchy substance; *d.* Solution of sugar.
3. Its character:
   a. A poison,—give examples;
   b. Relation to animal life;
      1. Action on the stomach,
      2. Disturbance of normal digestion,
      3. Method of removal from the stomach,
      4. Explanation of the "alcoholic breath,"
      5. Disturbing action on the brain,
      6. Action on the nervous system,
      7. Action on the muscle.
   c. Alcohol as food,—not useful.
   d. Disturbing effect of alcohol on the intellect;
   e. Effect on the will;
   f. Alcohol as an alleged protection against extreme heat or cold;
   g. Alcohol as an alleged protection against disease;
   h. Alcohol as a cause of vice;
4. Transmitted effects of alcohol;
   a. Hereditary appetite for alcohol.
5. Alcohol in domestic drinks, as cider, etc.
6. The proper place for alcohol:
   a. In the mechanical and scientific arts,
   b. In medicine,—always under the direction of a competent physician.

II.—Tobacco.

1. Its nature: *a.* A narcotic poison;
2. Its effects: *a.* On the body;
      1. Contagion from smoking—ulcers, sore mouth and lips.
      2. Tendency to produce dyspepsia, nervousness, an appetite for alcoholic drinks.
   b. On the mind;
      1. Loss of memory.
      2. Irresolution.
      3. Cowardice.
3. Transmitted effects:
   a. On sons—aimlessness, lack of vigor;
   b. On daughters,—nervous organization.

Note.—No attempt to present the above syllabus scientifically is deemed desirable. The more obvious evil effects should receive special attention.—*Manual of Institute work, Mich.*

Notes and News.

ONTARIO.

[We have to thank a number of correspondents for sending us contributions to this column. We hope that all our friends will continue to send us the current news. Items of educational news clipped from the local papers and enclosed in an envelope are particularly acceptable. We beg to state again that the disorder caused by our removal to new premises last autumn was the cause of our apparent neglect of many interesting communications. Our friends must not be discouraged but please write again. It would save us much trouble if they would kindly place matter for this column on separate sheets, and it would prevent many oversights which occur when business and news are intermingled. Rally round the JOURNAL and assist in making it still more useful! EDIT. C. S. J.]

The Hon. G. W. Ross has expressed his intention of giving a Gold Medal at the close of the present session to the Normal School student who obtains the highest standing at the final examination in June. We trust that still more substantial rewards will be offered to those who make the profession of teaching their life work and that some means will yet be devised for making the salaries of teachers bear some proportion to the amount of capital and energy they invest in the noble work. Meantime, it is inspiring to find a Minister of Education setting such an excellent example. Some of our wealthier citizens could not make a more patriotic use of their money than by founding scholarships at the Provincial Normal Schools.

At the last Entrance examination at Newmarket thirty-two out of sixty-four candidates passed. The Newmarket school sent up fourteen of the successful pupils, which made twenty-six passed during 1883.

The staff of teachers in the Caledonia High School for this session is as follows:—L. A. Kennedy, B. A., Head Master, J. Elliott, B. A., and L. H. Alexander, B. A., assistants. The County Model School is under the direction of Mr. R. C. Cheswright. The present staff is giving very general satisfaction. At the last examination, out of thirty-six candidates thirty-two passed—eight second class, fourteen third class, and ten intermediates.

We have received the announcement of Holy Trinity School, London. C. Turner Esq., C. M. is the Head Master.

"I don't feel healthy intellectually without your valuable JOURNAL." A. K. Feb. 7th, 1884. This is but one of numerous kind expressions we are continually receiving.

At Christmas, the pupils of the Newmarket Schools contributed to the inmates of the Industrial Home 111 apples, 23 oranges, 5 lemons, 1 box of figs, 2 lbs. sweets, 1½ lbs. nuts, 1 lb. raisins, cash $6.00, and 165 cakes of all kinds. A handkerchief was purchased and a 3 lb. paper bag was filled with nuts, candies, etc., for each inmate. Mr. W. Rannie, the principal, conveyed the present on Christmas morning. The folks seemed to enjoy very thoroughly the treat and bestowed many a "Merry Christmas" on the donors. The plan might be adopted by many schools. "It is more blessed to give than to receive."

A correspondent says: "You ask for jottings for the JOURNAL. Would items regarding changes, examinations etc, be suitable." Certainly, dear friend, we want to have in our columns a faithful record of every matter of educational interest. Again we repeat, we have to rely entirely upon our friends for the current news. Send it along, please.

Mr. A. Kerr, has entered on his fourth year with increased salary as headmaster of the school in Wiarton.

Mr. Brebner succeeds Mr. Ross as Inspector of the Petrolea schools, which receive 950 out of the 1,000 children in the town. The average attendance for 1883 was about 510. There are four school buildings and ten teachers in the town. Their names and salaries for 1884 are:—Mr. S. C. Woodworth, $800; Miss A. Langton, $400; Miss MacDougall, $340; Miss Corry, $340; Miss Echardt, $300; Miss A. Dibb, $240; Miss E. Austin, $240; Miss McRobie, $240; Miss Dawson, $240; Miss Ross, $240. About 38 pupils passed the Entrance Examination in 1883. A by-law to raise $7,000 for the purpose of building a new High School was carried on Feb. 2nd. The school will employ three masters, and will probably open in Sept., next. Music and Drawing are taught in nearly every department of the Petrolea schools.

The London *Free Press*, says: "It were far better for the rising generation that they be given a whole year's holiday than that they be exposed to disease and death for the sake of the little imperfect education that may be snatched in the depressing and poisonous air of poorly-ventilated school-rooms....The minimum of absolute air space provided for each child should be in no case less than 500 cubic feet, and this small space should be permitted only when there are such efficient means of ventilation and heating as will change the air contained in the room six times per hour, thus allowing 3,000 cubic feet of healthy air per hour to each child. People shut their eyes to the matter of drainage and ventilation because building is expensive." These are timely remarks, and deserve earnest attention from every teacher.

At the final examination of the Toronto Normal School, Inspectors Maxwell and Carson were assistant examiners. The report of both Normal Schools closes with the following pleasing paragraph:—"With respect to the undermentioned candidates who have hitherto held grade B certificates, the examiners report that marked improvement has been made by them during their attendance at the Normal School, and their answers at the final examination were excellent. It is recommended that the grade of their certificates be raised from 'B' to 'A.'

Toronto Normal School:—Alex. F. Birchard, James A. Edmiston, Neil S. McEachern, Mattie Murphy, Henry Chappel, George Kerr McDomall, Jessie Alexander, Emily F. Rose.

Ottawa Normal School:—Edward J. Etherington, Rowland John Hastings.

Among those who have grade A certificates the examiners report the following as specially worthy of mention for their satisfactory course and examination:—

Toronto Normal School:—David A. Burgess, Robert H. Carnie, Alice M. Bannister, Christina Niven, Harold Clark, Alfred Orr, Agnes Henderson, Sarah Ross.

Ottawa Normal School:—Peter D. McDonald, Enos J. Norrish."

Principals Davies and McCabe recently spent two weeks among the Normal Schools of New England to observe their methods of working. This is an excellent plan of the Education Department and will, we hope, be further developed.

On Feb., 15th the Banquet of the University of Toronto was held in the Pavilion of the Horticultural Gardens, and proved a great success. The capacity of the building was scarcely sufficient to accommodate the gathering of friends, graduates and undergraduates which assembled. The most note-worthy speeches were made by the Hon. Edward Blake, Dr. Daniel Wilson, Principal Caven, Hon. G. W. Ross and Rev. Dr. Lemuel Moss, President of the Indiana State University. The latter gentleman said that he came from a State where by easy and successive stages, the poorest boy or girl in the commonwealth may pass from the room where the alphabet is taught to the room where the bachelor's degree is given, without one penny of expense. People are beginning to recognize that the higher education was beneficial not only to him who received it, but also to the community at large. Schools are built on the same principles as penitentiaries—for the public good. The public school and the state college are for the benefit of all, and every educated man who comes into a capital increases the value of every corner lot in the city. What is the State for, if it be not to reach out its arms of beneficence? In the republic of letters is no custom house, no officer with suspicious glances, no State lines; all are bound together for the elevation of man.

The greatest enthusiasm prevailed in favor of granting further aid to the University, and at the same time the most cordial expressions of good will towards the sister Universities were uttered by the numerous speakers. The question of University Federation received favorable notice, and some significant hints were dropped that further reforms of a liberal character are needed within the Provincial University. Mr. Harcourt, M. P. P., amid loud applause, said that it was a shame that the doors of the University should be closed to the ladies, thus shutting out half the population. The fact is perfectly clear that if the *alumni* had more power entrusted to them the institution would speedily become thoroughly liberalized and enter on a new career of popularity and usefulness. Great confidence was manifested that the needed grant would easily be obtained.

In consequence of the increasing population and rising importance of the village of Tara, a new school-house is being constructed, which is much needed. The old building is too small and is unsuitable in every respect.

A meeting of the students attending the Toronto Normal School, was held on the 21st ult., for the purpose of organizing a Literary Society, Mr. T. Kirkland, the Science Master, being in the chair. The following officers were elected :—President, A. Hutchinson ; 1st Vice-President, Miss Elliott ; 2nd Vice-President, B. F. Black ; Sec-Treasurer, F. Crassweller ; Assistant Sec-Treasurer, Miss E. Edwards ; Critics, H. F. Forrester, Miss Harris ; Committee, T. W. Sloan, A. D. McConnachie, J. H. Gimby, J. R. Balfour, G. H. Thomas, Miss Barrie, Miss Killoran, Miss Eadie, Miss Gray, and Miss Grant. The society is named the "Toronto Normal School Literary Society," and will hold its meetings every Friday afternoon, commencing at four o'clock. The members hope to be able to hold some public meetings during the term.

The following petition was numerously signed by the teachers of Stormont County, at their last meeting held in Cornwall on the 7th and 8th of February :—

PETITION.

To the Hon. the Minister of Education of the Province of Ontario.

SIR.—Believing that the education of the people would in a great degree prevent the evils of intemperance, we the undersigned officers and members of the Teachers' Association of the County of Stormont, in the Province of Ontario, desire to urge the introduction of scientific temperance instruction into the public and high schools of the Province of Ontario. We would respectfully but very earnestly call your attention :—

1st. To the terrible effects caused by the excessive use of alcoholic liquors upon the health, mind and morals of large numbers of our people and to the pressure of necessity for some sure and effective remedy therefor.

2nd. That in a large majority of cases the habit of drinking is contracted by children and youth without any correct knowledge of the nature of alcoholic liquors and their effect upon the human system.

3rd. That no more efficient medium than the public school can be found for imparting this much needed knowledge to the rising generation.

We earnestly request, therefore, that you will order adequate stated instruction to be given on this subject to the pupils attending the public and high schools, with a view to their examination on the subject, for promotion.

We unite with numerous friends in congratulating our esteemed friend H. E. Kennedy, M.A., late head master, Trenton high school, on his matrimonial union with an accomplished young lady from Colborne. We wish the happy couple many years of prosperity and felicity.

NOVA SCOTIA.

The Report of the Superintendent of Education for the past year shows a total registration of 98,307 pupils, being an increase over that of the preceding year of 2,395. The comparative attendance by *terms* is given as follows :—Winter Term, (1883) 79,091, (1882) 76,888 ; Summer Term, (1883) 81,863, (1882) 81,196. Considerable increases are also shown in the number of teachers and schools. The total number of teachers in service during the Winter Term, was 1,911,—703 males and 1,208 females ; during the Summer Term, 2,011,—608 males and 1,403 females.

The Provincial expenditure for education was $186,087.12. Of this sum, grants to common schools consumed $149,761.50 ; Inspection $11,450 ; Provincial Normal and Model School, $6,051 ; County Academies, $9,000 ; Special Academies, $4,000. The remainder was distributed among various services.

The Superintendent discusses at some length, what he views as desirable readjustments of the relation of the Provincial Normal School to the other schools, and the certifications of teachers. He also repeats suggestions offered in the previous Reports touching a reconstruction of the system of Academic education.

The Inspectors' reports generally disclose progress in the work of the schools, and deal interestingly with many phases of the important question of public education.

Mr. H. S. Congdon, has been appointed Principal of the public school, Dartmouth, *vice* Mr. L. D. Robinson, resigned.

The annual dinner in commemoration of the George Munro benefactions to Dalhousie College took place on the 9th ult. It was largely attended by the Faculties of the various departments, and by the students almost *en masse*.

The question of admitting the children of the colored citizens to the public schools of Halifax, without any discrimination, has not yet been definitely settled by the Board of School Commissioners. That body has under consideration a proposition to provide improved accommodation for colored children in the primary grades, and to admit those of the necessary qualifications to the higher departments of all the schools, including the high school. The citizens of color, however, have by resolutions adopted at a public meeting, expressed their determination to rest satisfied with nothing short of the sweeping away absolutely of what they regard as an unjust discrimination.

The newly established Law School of Dalhousie College, has upwards of 50 students in attendance.

GENERAL.

Dr. Arnold, writing to one of his old pupils who had commenced the work of tuition, said, "You need not think that your own reading will now have no object because you are engaged with young boys. Every improvement of your own powers and knowledge tells immediately upon them, and, indeed, I hold that a man is only fit to teach so long as he is himself learning daily."

ARGENTINE REPUBLIC.—Education is making rapid progress in this country. For the last year an attendance of over 44,000 pupils was reported in the public schools. Buenos Ayres alone had 16,000 of these in 169 schools of three teachers each.

ENGLAND.—The University of London has taken an important step in resolving to confer a new degree, to be called the "Teachers' Diploma." It is to be under the seal of the University, and signed by the chancellor. No one will be examined, however, who has not already graduated. The examination will test the practical ability as well as the information of the candidates, and will combine a close scrutiny into the knowledge regarding the theory of the art of teaching. These diplomas will be certificates of merit of the highest order.

A translation of an address delivered to secondary school teachers in Switzerland has been circulated by the Bureau of Education to answer the question, "How to teach natural science." It urges that knowing facts is not the object of such education ; in that case a supply of works of reference would be a royal road. "One gets on faster with a child by carrying it, but it is for the child's interest to teach it to run and swim by itself." A teacher, therefore (who must be laboriously grounded himself), must patiently bring *all* his scholars, not the most promising only, to discover and observe facts for themselves,—teach them to *see*. Cram is most dangerous in scientific teaching, because most easy to both of them. Books, therefore, should be little used, and nothing about an object should be taught, without such object before them. After *seeing*, the next lesson is *describing*, with the help of drawing if possible, both leading to accuracy in the use of language. Plants first, which are plentiful for experiments ; then animals of different classes ; later on minerals should be chosen, mechanical effects on these latter first, later on chemical. The district museum of natural history and such classes would mutually assist each other greatly ; in fact neither, to be successful, would long go on without the other. But the making of collections must not become a rage with pupils.

A correspondent of the *Glasgow Herald* who has been making a tour in Norway thus writes on the subject of education :—In the Norwegian, as in all other well-ordered village communities, the schoolhouse stands next in importance to the church. It is there usually a spacious and well appointed building. Both the town and country schools have their vacation during the period of the hay harvest, the herring fishing, and the tourist. I had not, therefore, the opportunity of seeing the schoolmaster at work. Under the guidance, however, of a schoolmaster, whose home-spun suit, generally substantial aspect, and shrewd but kindly face, put me in mind of the good old-fashioned Scottish dominie, I inspected the premises occupied by one of the Bergen public schools. This building was divided into a number of rooms, each fitted for the reception of not more than thirty scholars. Each scholar had his or her separate seat and desk, and more than the number of cubic feet of air required by our sanitary inspectors at home. The subdivision of the school building into small class rooms renders necessary the employment of a large staff of teachers and monitors, and is an arrangement somewhat costly, if admirable. Another admirable feature of the Bergen Public School which I inspected was its spacious gymnasium, in which each of the many classes into which the school is sub-divided was exercised three times a week. Our School Boards, it seemed to me, have something to learn from the analogous bodies in Norway in the matter of attention to the physical training and the physical health generally of their pupils. In the Board schools of Norway, in addition to the three R's, the elements of physiology and of physical science are taught, as is also one or more of the modern languages. Of these of late years English has become the favorite. It is the language most commonly taught in the primary schools. It has the foremost place

on the modern side of the secondary or grammar schools, which are planted in all the considerable towns, and which are often the recipients of large private endowments. Sir Charles Dilke in his "Greater Britain," predicts that a few centuries hence English will be the universal language. Perhaps this vaticination is overbold; but a modest prophet may at least suggest as a high probability that, in the year 2001, Norway will have become bilingual, and that English will be as commonly spoken there as in Wales or in the Highlands. Education, it appears, from what has been said above, is well attended to in the western half of the Scandinavian peninsula. Even into its most mountainous and sparsely peopled regions the schoolmaster penetrates. In these regions he itinerates, teaching in rotation for a week or two at a time during the winter and spring at each of several farms or hamlets. I do not suppose that English is taught by these itinerant instructors of youth; but a little English is picked up by their ex-pupils (turned post-boys) from tourists, a little more by ghillies, or their Norwegian analogues, from sportsmen who have spent long summers in their company; more still by farmers returned from lengthened sojourns in the American backwoods or prairies. Thus English speech is slowly but surely making its way even into the remotest corners of Norway.

The woman question, in the matter of the equalization of salaries' has scored another triumph in the city of Brooklyn, N. Y. Miss H. N. Morris has fought the battle and succeeded. The pay of principals of full-grade grammar schools in that city had been fixed by the School Board at $2,700 per year, but when Miss Morris by sheer force of fitness was elected to the position of principal, the Board were willing to accept her services but demurred at the price,—because "she was a woman"; because "a good male teacher was a little better than a good female teacher"; because,—the old array of arguments had to be got over. Strangely, even in Brooklyn, so near the parish of the Rev. Morgan Dix, all were not satisfied with these arguments. They reasoned that "either Miss Morris is, or is not, a capable and efficient principal. If not, why retain her?—if capable, why not so pay her?" But to attempt to fill these school-committeemen with this radical logic seemed almost as futile as filling the sieve of the Danaides. The maidens of to-day, however, were more successful than those of old. On November 16th, after six years of asking, the Board voted to pay Miss Morris the full principal's salary of $2,700. Thus a woman once more gains a well-earned victory, establishing another precedent for the payment of equal salaries for identically equal work, irrespective of sex. In a city where thirty-nine out of forty principals are men, even the most conservative may well rest assured that a woman is not liable to be elected to the position unless her exceptional merits compel her.—*Exchange.*

To Acadia College, Wolfville, N. B., belongs the honor of being the first college in the Dominion of Canada to appoint a Professor of "The Principles and Practice of Education." This is eminently a progressive action. It is one of the most important steps in the interest of general education that has been taken in Canada for many years. There is an importance attached to the movement which deserves more than a passing notice. It may at first sight be supposed that a Chair of "The Principles and Practice of Education" makes simply a provision which applies only to those students who are preparing to be teachers. This is a great mistake. It is true teachers will receive special benefits, but the discussions of a Professor of Education should take a wider range than the consideration of methods of teaching and school organization and management. This is but one of the factors which enter into the problem of educators. The family, the social, and the civil circle perform their several parts in the development of human character. And each must be taken into full account in any well devised educational scheme. A chair of the principles and practice of education must therefore include these as well as methods of teaching and school management. In short, it must include the discussion of all the educational forces that are operative in moulding the individual man, and in moulding society, and also the nature of the organizations and appliances necessary to make these forces productive of the highest good.—*N. Y. School Journal.*

The Eau Clare (Wis.) Kindergarten Association has just completed a fine building for kindergarten purposes, at an expense of $5000. Miss J. L. Jones is the supervisor of the enterprise.

Some years ago, in one of the model schools of Pennsylvania, text-books were banished from the class-rooms, and oral instruction substituted. Dr. Schaeffer thus sums up the results: "Pupils, parents, and teachers were delighted with the result. After a time the promotions lifted the pupils taught in this way into classes of the Normal department. At first they seemed by far the brightest in the class, so quick were they in catching the point of every explenation. But, after the lapse of some weeks, reports came that this boy and that girl were not keeping up with the class, and the fact that they had been model-school pupils caused no little surprise. On close investigation, it was found that the system of oral instruction had developed the perceptive powers, but not the power of independent preparation af lessons; that the plodding boys from the ungraded county schools were taking the lead by reason of the superior will-power which they had developed." The conclusion is, that "when instruction is made interesting for the purpose of saving a pupil the necessity of application to his books, it results in a kind of intellectual weakness which prevents concentration upon subjects that are not attractive."

One of the clearest evidences of the increasing favor with which co-education is received is found in the failure of so many female academies. A contemporary says it could name a dozen or more in Ohio and Indiana, where the appointments and accommodations were very complete, but have ceased to exist, and their buildings have been converted into hotels, asylums, or factories. There was a rage twenty, thirty, and forty years ago to build high schools and colleges for young ladies, but lately every new enterprise in those States aims at co-education.—*New England Journal of Education.*

The Brooklyn Board of Education has at last passed a resolution directing all principals of schools to receive colored children on an equality with white. Heretofore the practice has been that in the sparsely-settled wards where colored schools could not be sustained, and the colored children were only, say, half-a-dozen among a hundred white, they were admitted; but that in densely-peopled wards where the proportion of colored children was large, and schools especially for them had been provided, they were limited to those schools. It has become apparent, however, that the teaching of the colored schools is inferior; and hence in justice to those colored citizens who desire that their children shall receive the best instruction, the color line has everywhere been broken down.

The Legislature of the State of California, at its twenty-fifth session, commencing on the first Monday after the first day of January, A.D. eighteen hundred and eighty-three, two-thirds of all the members elected to each of the two Houses of eaid Legislature voting in favor thereof, hereby propose that section seven of article nine of the Constitution of the State of California be amended so as to read as follows:

SECTION 7. The Governor, Superintendent of Public Instruction, and the Principals of the State Normal Schools shall constitute the State Board of Education, and shall compile or cause to be compiled and adopt a uniform series of text-books for use in the common schools throughout the State. The State Board may cause such text-books when adopted to be printed and published by the Superintendent of State Printing at the State Printing Office, and when so printed and published, to be distributed and sold at the cost price of printing, publishing, and distributing the same. The text-books so adopted shall continue in use not less than four years, and said State Board shall perform such other duties as may be prescribed by law. The Legislature shall provide for a Board of Education in each county in the State. The County Superintendents and the County Boards of Education shall have control of the examination of teachers and the granting of teachers' certificates within their respective jurisdictions.—*The Pacific School Journal.*

The Hon. John Quincy Adams, in the school report for 1880-'81, thus gives the result of Col. Parker's superintendency: "For five years the town had the benefit of his faithful, intelligent, and enthusiastic services. In those years he transformed our public schools. He found them machines, he left them living organizations; drill gave way to growth, and the weary prison became a pleasure-house. He breathed life, growth, and happiness into our school-rooms. Year by year as the change went on the gradual process of transition was reported to the town, and year by year the town by great majorities approved the work and sustained its author. The committee have never doubted that he wrought a great gain to education among us, and that our schools have been vastly bettered by the methods he introduced, the organization he effected, and the enthusiasm he instilled."

How many teachers ever show or tell their pupils how to study? This is very important. Weeks and months are often wasted even by older pupils, because they do not have a definite idea of, or a systematic plan for, studying.—*N. E. Journal of Education.*

Readings and Recitations.

[We earnestly recommend teachers to encourage their pupils to commit to memory *prose* recitations. In no other way can composition be taught more effectively, nor literary taste be more rapidly developed. The following may serve as trial pieces. Put the epitaph on the blackboard, and, if found necessary, the first two words of each sentence. This will arouse the curiosity of the hearers and will serve a better purpose than prompting to the speakers who declaim.—EDITOR.]

THE STORY OF A LITTLE HERO.

In the churchyard of an isolated hamlet in Brittany an inscription has been engraved on an unpretending stone slab, couched in these terms :—

> PIERRE BOZEC,
> *Ship Boy,*
> Who lost his life in saving the crew of
> the 'Sancta Maria.

The circumstances under which this humble and youthful hero died in saving eight Breton sailors are singularly touching. The lad, an orphan, embarked on a small trading vessel, the captain and crew of which systematically ill-treated him. Some time ago the little craft was in imminent danger of breaking up on the rocks in the neighborhood of Corsan (Finisterre). All the men were on deck, with the captain, who, foreseeing a catastrophe, told those about him to be prepared for the worst. A hundred yards off was the coast, and a group of fishermen were visible through the driving rain, debating the point how to render assistance to the distressed vessel. In the last emergency the captain took a rope, made a slip knot in it, and asked who would swim to shore through the breakers? The answer was promptly given by the lad Pierre, who said that he was the right one to run the risk, being without relatives or parents to regret him if he perished. His offer was accepted ; the brave boy started on his perilous mission, and after a while a ringing shout told that he had reached the land. The boat was saved, with its human freight, but the lad was lost. Just as he reached the shore the waves threw him with violence against a sharp pointed rock, and when the fishermen drew up the rope it was to find a mangled corpse attached to it. The crew of the Sancta Maria, smitten with remorse for their former brutality towards the ill-fated lad, and with admiration for his courage, perpetuated the memory of his brave deed on the tablet which marks the spot where he was buried.—*Scholar's Companion.*

BESSY'S LIFE ROPE.

Steeple Jack, who was celebrated for working on high steeples, had a daughter named Bessy, who had much of the fearless, adventurous spirit of her father, and would carry up his dinner to the dizziest heights without trembling ; she seemed to feel as safe as a bird, and would stand at the edge of the loftiest scaffold, amusing herself by scattering bits of paper in the air, laughing to see her little pigeons fly, for so she called them.

Once upon a time, a flash of lightning struck Repton spire, and displaced the cross and globe which surmounted it, also doing great damage to the upper courses of fine stonework, and Steeple Jack had to repair it. This he did by ascending the tower as high as the bell chamber, then placing ladders within the hollow of the spire, until the highest loop-holes were reached, through which braces were put crossways ; on them a slight flooring was laid, which supported two light ladders, reaching up to the ball. Day after day Bessie climbed with her father's dinner in a basin slung in a handkerchief, to this aerial scaffold, and at length the job was completed, a new copper ball, brightly gilded, superseded the old one, and a glittering cross surmounted the graceful steeple. Jack had done his work so well, that the vicar and church-wardens resolved, in addition to his pay, to present him with a new coat, vest, and hat, and a sort of village fete was to be held in honor of the occasion. Drinking one night at the "Red Lion," Jack had bragged that he would put on the new clothes on the top of the ball ; and he was not the man to risk being twitted for cowardice from not making his rash promise good. His assertion got abroad, and on the fete day, quite a crowd, from the adjacent villages and farms, gathered to witness the exploit. Jack's wife was away working at a lone farm-house some two miles from the village, and Bessy had accompanied her, for she knew that her husband would in all probability spend the day in dissipation, and she did all she could to conceal his weakness from the little maiden.

With the bundle of clothes in his hand, Jack started up the tower, the crowd eagerly watching until he emerged from the loop-hole on to the scaffold. He came out, and pulling off his old hat, flung it down among the people, then taking a rope in which he had made a noose, in his hand, he ascended the ladders. Flinging the rope over the ball, the noose passed round the cross, and, tightening it, Jack managed to get beyond its bulge, and soon stood on the very top of the cross, while the huzzas of the crowd below came up like the buzzing of bees to the elevated regions of his proud ambition. By some unlucky accident, while Jack was coolly divesting himself of his old jacket and vest, having made his bundle safe on one of the arms of the cross, the noose of the rope slackened, and the rope itself slipped over the ball, leaving him without any possible means of overcoming its rotundity. A cry of horror made Jack look down, and he at once understood the desperation of the position. His pride was humbled, a vertigo seized his brain, and he would have fallen if he had not clutched the cross. What was to be done? Among the whole crowd there was not one with sufficient courage even to brave the scaffold, much less to mount the tottering ladders which led from it to the apex of the steeple.

Concentrating all his energies into one shrill shriek of agony Jack exclaimed :

"Send for Bessy !"

There was a movement in the crowd, and a farmer in his buggy drove off for the daughter of the entrapped steeple-climber. What an hour of waiting was that ! When Bessy arrived she displayed no fear, but taking on her little arm a coil of slender rope, she passed through the crowd, which readily made way, and ascended the ladders. Standing on the topmost round, with one arm passed around the slender stonework, she flung the rope. Jack clutched it, and the little maiden descended the steps. All the danger was over. Jack made the rope fast, and was soon upon the scaffold, while a shout of joy rose from the people below.

Bessy could not understand that she had done anything wonderful, but she embraced her father, and putting her little face to his, begged him to thank God for his safety.

This was many years ago, but should any of you visit Repton, you may still see a fragment of line swinging in the breeze from the now tarnished cross surmounting the steeple, and among the simple peasantry it goes by the name of "Bessy's Life Rope.—*Scholar's Companion.*

HIGHER.

Not at a bound,
But round and round,
Up the ladder we're climbing ;
Striving to aim at something higher,
Striving to win the heart's desire,
With noble zeal the soul to inspire,
Up the ladder we're climbing.

Each step we count the while we mount,
Up the ladder we're climbing ;
Ladders of learning, ladders of fame,
Ladders of wealth, it is all the same,
To gain a fortune or win a name,
Up the ladder we're climbing.

Pause though we may,
Yet every day
Up the ladder we're climbing ;
Not content with a low degree,
Anxious still at the top to be,
Hand over hand continually
Up the ladder we're climbing.

A WELSH CLASSIC.

BY H. H. BALLARD.

An unlettered clergyman wanting a place.
(His manners were genial and pleasant his face),
Received a kind letter inviting him down,
To preach to a church in a large country town.

The town was uncultured, old-fashioned and plain,
The principal business was harvesting grain,
And none of the church members ventured to speak
A word of the Hebrew or Latin or Greek.

For this very reason they wished all the more,
A scholar well-grounded in classical lore;
While a candidate might just as well stay away,
If he didn't quote Hebrew at least once a day.

The divine about whom this odd story was told,
By the "Times" of Manhattan, was cunning and bold,
And knowing they wished for a classical man,
Though he didn't know Latin, he hit on a plan.

For he thought, "We shall see how much shrewdness avails,
Though I cannot read Greek, I'm a native of Wales;
If a few Welsh expressions I cautiously use,
It may rival the Hebrew in pleasing the pews."

On the critical day, with exceptional grace,
With well-attuned voice and well-controlled face,
He read from the Bible a passage or two,
And remarked, "My dear friends, this translation won't do.

To be sure 'tis correct, but if beauty you seek,
Hear the rhythmical sound of original Greek!"
Then boldly a medley of Welsh he recited,
And marked the effect on his hearers benighted.

The children gazed up with a wondering stare,
Their mothers assumed an intelligent air,
While the deacons all nodded, as much as to say,
That Greek was by far the more excellent way.

A still bolder venture he hazarded next,
By a curious way of announcing his text:
"These words, as my hearers have noticed of course,
Have lost nearly all their original force.

In the Hebrew how clearly the thought flashes out,"
And more of his Welsh he proceeded to spout;
When what was his horror to spy near the door,
A jolly old Welshman, just ready to roar!

Overcome with remorse and foreseeing the shame,
Exposure would bring to his reverend name,
The preacher's mad impulse at first was to run,
But the Welshman's round face so brimming with fun,

Suggested a possible plan of escape,
Which none but a terrified parson could shape;
He bravely confronted that dangerous smile,
And coolly continued his sermon awhile,
Till at length without showing the least agitation,
He rallied himself for a final quotation:

"The rendering here is decidedly wrong,
Quite different thoughts to the Chaldee belong;"
Then Welshman in pulpit to Welshman in pew,
In the barbarous dialect they alone knew,

Cried "Friend! By the land of our fathers, I pray,
As you hope for salvation, *don't give me away!*"
The joke was so rich, the old Welshman kept still;
And the classical parson is preaching there still.

There is a singular house in Southern California. It has been built inside of a tree. The tree is an immense one, doors and windows have been put in the hollowed out inside, and the house is eight stories high, about as high as some of the New York private houses will probably get to be by-and-by. The door to this straight up and down house is a ladder, and so is each pair of stairs; and outside of the top room is a balcony, shaded by the tree's leaves.

REVIEWS.

RECEPTION DAY, No. 3. *New York: E. L. Kellogg & Co.* 30 cents. The third number of this quarterly issue confirms the impression of its thorough practical value. It contains fresh and original dialogues, recitations, declamations, and short pieces in poetry and prose, to meet the constantly recurring needs of schools and gatherings of any sort, public or private. All the selections are easily committed to memory—simple, without being childish. It is of excellent moral tone, and calculated to be an immense help in school work. The dialogues are readily managed as regards accessories, requiring little or no stage furniture. The requirements of both young and older pupils are provided for, and the work is suitable either for public or private schools. The outward appearance of the book is most attractive, being tastefully bound in paper covers printed in two colors. It is fortunate for teachers that a fresh supply of such good material may be obtained quarterly at the small cost of 30 cents a number.

PLANT ANALYSIS; OR BOOK OF PLANT DESCRIPTIONS: By GEORGE G. GROFF, M.D. *Science and Health Publishing Co'y: Lewisburgh, Pa.* This little publication consists chiefly of a number of sets of blank forms bound together in convenient shape for use by botanical students. Each form when filled up will contain a full description of a single plant, the description embracing particulars regarding the root, stem, leaf, inflorescence, calyx, corolla, stamens, anthers, pistil, fruit, and seed. There are also hints to the teacher and the pupil on the proper method of pursuing botanical studies; a handy list of botanical terms in common use; and a list of subjects suitable for essays. The book will doubtless be found a useful adjunct in every botanical class where real work is being done.

THOMPSON'S GREEK SYNTAX; a Syntax of Attic Greek, by F. E. THOMPSON, M.A., Assistant Master at Marlborough College. *Rivington*, 1883. On first thought one is tempted to anathematize the author of a new book on Greek Syntax: we may, however, console ourselves with the consideration that since "in the making of (bad) books there is no end," the producer of a good book is beyond the pale of reproach, though it cover the well trod ground of Greek Syntax. We have had many treatises on this subject since the days of Dionysius Thrax, and it is far from probable that the one before us will be the last. To the difficult task of making an old friend welcome in a new guise, Mr. Thompson has brought not only sound and ripe scholarship, but also class-room experience. And his class-room experience has apparently taught him that, so far as boys are concerned at least, it is advisable to divorce Grammar from Metaphysics. Metaphysics and theoretical grammar are inseparable; but theoretical grammar involves comparative grammar, and the study of comparative grammar implies a more than passing acquaintance with the results of philological research, but the average school life of our boys is too short to admit of their becoming experts in philology. Accordingly we think that Mr. Thompson has displayed great wisdom in approaching and elucidating the difficulties of Greek Syntax from the practical side. He has indeed given us a practical book, and one which we can heartily recommend as a thoroughly reliable *vade mecum* through the intricacies of the most rhythmical and flexible language the world has known. Our sole regret is that "want of space" prevented our Author from treating of the Particles; had he dealt with them as he has dealt with the Prepositions, his work would have been beyond criticism.

MAGAZINES.

THE NORTH AMERICAN REVIEW for March, contains the following articles:—Is our Civilization Perishable, by Judge J. A. Jameson; Agricultural Politics in England, by William E. Bear; A Defenceless Sea-board, by Gen. H. A. Smalley; Neither Genius nor Martyr, by Alice Hyneman Rhine; The Story of a Nomination, by W. O. Stoddard; Literary Resurrectionists, by Charles T. Congdon; How to Improve the Mississippi, by Robert S. Taylor; and the Constitutionality of Repudiation, by D. H. Chamberlain and John S. Wise, M.C. Nearly all these titles explain themselves. Mrs. Rhine's contribution and Mr. Congdon's are able and interesting additions to the vast body of magazine literature that has been evoked by the publication of the lives of the Carlyles. Mr. Stoddard's paper gives a valuable account of Lincoln's nomination.

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The arrangement is excellent.

I consider your "Exercises on False Syntax" a valuable aid to teachers of English, especially where a master's time is taken up with other departments of High School work. The arrangement of the exercises is excellent, and Part I. is specially valuable to the beginner whose attention is directed to suitable articles in the authorized grammars. In Part II. the pupil is thrown upon his own resources, after being sufficiently aided in Part I. I am glad such a work has been prepared, and shall introduce it into our High School. W. W. JARDINE, B.A. H. M., H. S., Newcastle.

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VOL. IX. TORONTO, APRIL, 1884. No. 4.

Table of Contents.

	PAGE.
EDITORIAL :—	
Entrance Examinations	73
Drawing	73
Secondary Education in the Maritime Provinces.	74
Mr. D. J. Goggin	74
Death of Inspector Butler	75
Death of Inspector Dewar	75
Notes	75
Reports of Cases	76
Intermediate and Second-class Literature for 1885	76
MATHEMATICAL DEPARTMENT :—	
Elementary Algebra	77
Intermediate and Second-class, July 1883	77
Dalhousie College Examinations	78
CORRESPONDENCE	55
SPECIAL ARTICLES :—	
Reading and Elocution	79
The World's Chemical Congress	81
Notes of Talks on Teaching	83
EXAMINATION PAPERS :—	
University of Manitoba	84
County of Peel Promotion Examinations	85
PRACTICAL DEPARTMENT :—	
Blackboard Work	86
What Constitutes a Teacher	87
The Teacher's Position	87
Practical Counsel to Candidates for Examination.	87
The New Code and Over-pressure	88
The Teaching Art	88
Lesson on Common Objects	89
What Training Classes Should Have and Do	90
PUBLISHERS' DEPARTMENT :—	
Notice to Club Subscribers	90
NOTES AND NEWS :—	
Ontario	91
Manitoba	92
Nova Scotia	92
READINGS AND RECITATIONS	93
TEACHERS' ASSOCIATIONS	94
REVIEWS	96

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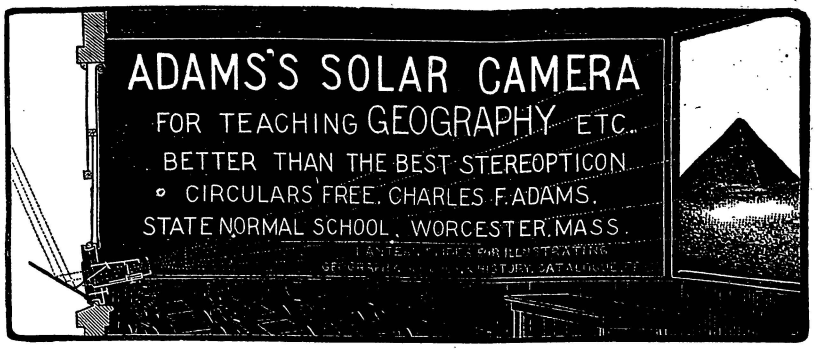
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VOL. IX. TORONTO, APRIL, 1884. No. 4.

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An Honorable Mention at Paris Exhibition, 1878.
Recommended by the Minister of Education for Ontario.
Recommended by the Council of Public Instruction, Quebec.
Recommended by Chief Superintendent of Education, New Brunswick.
Recommended by Chief Superintendent of Education, Nova Scotia.
Recommended by Chief Superintendent of Education, British Columbia.
Recommended by Chief Superintendent of Education, Manitoba.

The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

ENTRANCE EXAMINATIONS.

In the Report just presented the Senior Inspector discusses this topic at some length. With respect to the examination for admission, he observes that the principles of elementary arithmetic are really few and simple, and that with the improved methods of teaching that subject, the slightly higher standard recently adopted has had a perceptibly beneficial effect. He thinks that the adverse criticism of the arithmetic papers has been confined to a few habitual complainers. A better style of exhibiting the work on paper has been attained, but there is still greater improvement needed in this respect. We fear the root of the evil lies in the teachers, and we cordially invite attention to the undoubted fact that neatness and accuracy go hand in hand in all mathematical studies. Teachers cannot insist too strongly upon having neat work and logical arrangement of all processes. Pupils must be trained to put down the whole work, even the simplest steps, if they are to secure a thorough grasp of the subject. No other time in school is spent to better purpose, than that occupied in making pupils write and re-write on the blackboards or on paper, neat, clear, logical statements of their arithmetical work. It is a piece of training that will be valuable for life, no matter what position the pupils may afterwards be called to fill. It is the best practical cure for careless and slip-shod thinking. The Inspector thinks there is no force in the objections to the "outline plan" of teaching history to beginners. On this point, as our readers are fully aware, we hold a different view. We hope to see the course for public schools limited to a special period, say from 1688 to the present time, so that the pupils may gain a real knowledge of the social and political state of England during at least one period. No one pretends to say that under the present plan anything more than "drum and trumpet history" can be possible.

In literature, the present selections are admitted to be very poor, and a separate collection of choice pieces is proposed. This is certainly a good suggestion, especially if the proposed selections were to be made sufficiently numerous to admit of new work for, say, three succeeding examinations. On the papers it would be well also to insist upon the pupils being able to quote from memory most of the pieces set down for study. A pupil's vocabulary is very little enlarged by such a mere study of words as comes to him from the mastery of a spelling book. In this connection it would be well also to exact prose as well as poetry. The reading book should be used for its legitimate purposes alone, and boys and girls should be able to read any page of their fourth reader with a fair amount of intelligence and expression, instead of knowing only the few lessons studied as literature. In reply to numerous enquiries we give in another column the literature selected from the readers for the next examination, which will be held Thursday and Friday, July 3rd and 4th.

DRAWING.

The Normal Schools are now turning out teachers qualified to teach elementary drawing with considerable skill. This will prove the real fulcrum by means of which the standard of attainment will be successfully elevated throughout the schools. The subject is so pleasant that it is virtually a recreation in school, and a little leaven will be sufficient to leaven the whole lump. Just as soon as our teachers fairly discover the simplicity of the thing they will everywhere begin to use it as a relief from the monotony and tedium of ordinary school drudgery. Penmanship will receive an immense stimulation, and lack of style and neatness in mechanical work will cease to be a standing reproach to our excellent public schools. If geometrical drawing could be well taught in all the high and county model schools also for the next two years the effect would be felt in the public schools for many years to come. Wherever it has been tried it has been found that the youngest children soon become fond of the drawing lesson and spend happy hours over it, while, at the same time, they are cultivating their taste, developing ingenuity, securing dexterity of the hand and quickness and accuracy of the eye.

In the Report for the current year, Dr. McLellan points out the special disadvantages under which the subject has been placed. It has been encouraged, but only nominally. It has not been allowed to become a mark-earning option. There is a continual demand for so-called practical education, and yet drawing, which is really the basis of manual and designing skill, has been either wholly ignored, or only nominally encouraged. There is not a single occupation in this country in which an elementary knowledge of the subject is not of great practical utility to the possessor. The farmer has need of it a hundred times a year, and often has to pay dearly for

his inability to sketch some simple draught. In all trades it is of great utility, and a teacher who can rapidly sketch off an outline picture on the blackboard is worth at least one-third more for general school purposes than the teacher who has no such practical skill. If a boy begins to study Latin or algebra he gets very little value for the time spent unless he can carry on his studies for at least a year, but with drawing he gets full value for the time, even if he is compelled to break off his studies at the end of a single month. Looking simply at the utility of the subject, we heartily agree with the proposal to make it more or less obligatory in all our schools. To the teacher of junior classes it is absolutely an essential requirement. As a means of producing the refinement and culture at which all education aims, it is second to none of the studies on our programme. All that is needed is to secure for every teacher a good systematic course of elementary instruction, such as the Normal Schools and the School of Art now supply, and the rest will soon follow easily and naturally. In the meantime, if those who have not these advantages, would show a little private enterprise and provide themselves with Walter Smith's manuals, they might easily accomplish results that would astonish themselves and very materially assist to prepare their pupils for the practical duties of after life.

SECONDARY EDUCATION IN THE MARITIME PROVINCES.

It is known to most readers in the JOURNAL that for some years past considerable agitation has prevailed both in Nova Scotia and New Brunswick respecting the modes by which the interests of secondary education are fostered. The Reports of the Superintendents, Dr. Allison and Mr. Crocket, lead us to suppose that early legislation on the subject is probable in both Provinces. We think it will interest our readers to have placed before them the substance of the suggestions offered by the respective Superintendents.

Dr. Allison proposes for Nova Scotia as follows :

I. Let a special legislative grant be provided for all teachers of the Academic class (Grade A) employed in sections (other than those maintaining a Provincial Academy) which have a system of regularly graded Public Schools of at least *three* departments ; subject to the following conditions :

(1.) That this grant be paid only to teachers employed for at least one year continuously in the section.

(2.) That the teacher claiming this grant be in charge of the advanced department of the school.

(3.) That on an annual inspection and examination of the department by the Inspector in whose district it is situated, a required percentage of the registered pupils show a satisfactory knowledge of the subjects embraced in the first year of a prescribed course of High School studies.

(4.) That proper conditions for prosecuting advanced studies are provided by trustees.

II. Let provisions be made for a class of institutions to be known as PROVINCIAL ACADEMIES, the privilege of establishing which shall be open indiscriminately to the school sections of the Province, due security being taken *that such establishment shall always involve a large amount of local effort, and be justified by existing educational circumstance.* I would suggest the following conditions as necessary to guarantee *High Schools* of a *bona fide* character :—

(1.) The employment of at least *two* qualified professors or teachers exclusively engaged in Academic Instruction.

(2.) The certified attendance of a *minimum* number of pupils duly qualified according to a prescribed course of study. It should be the duty of the Superintendent of Education to hold an annual inspection and examination of these Academies, and *the passing of a required percentage of the pupils should be essential to participation in Provincial funds.*

(3.) Such an outfit of class room accommodation and scientific apparatus, as, in connection with a superior teaching staff, will adequately prepare pupils not only for college and entrance upon the professions, but as educated persons, for intelligent devotion to the varied interests which make up the common life of the people of Nova Scotia.

The general outlines of this plan having been established by legislation, the working out of subordinate details should be left to the Council of Public Instruction. That only communities *able and willing to carry it into successful execution, should engage in the attempt to found such institutions,* is a point which should be guarded with the greatest care.

For New Brunswick Superintendent Crocket suggests :

1. That the Grammar School Acts be repealed, and that the property held by the Grammar school trustees be transferred to the school trustees in the district in which it lies.

2. That the provision relating to the apportionment of the "superior allowance" be also repealed.

3. That the present apportionment for grammar schools and for superior allowance constitute a grant to be applied under regulations of the Board of Education to the following classes of schools, which boards of trustees should be empowered to establish with such limitations as are set forth :—

(*a*) *Superior Schools.* Superior schools may be established in each county on the following basis :—One superior school shall be allowed to each 6,000 inhabitants, and if the county after being divided by 6,000 leaves a remainder of 5,000 or over, another such school may be established.

(*b*) *County Grammar Schools.*—One grammar school may be established in a county, or in lieu thereof an additional superior school.

A grammar school should not be established in the same parish with a superior school.

(*c*) *Provincial Grammar Schools.*—One provincial grammar school may be established for each 64,000 inhabitants, and the boards of trustees of Chatham or Newcastle, Moncton, St. John, Fredericton, and St. Stephen should be empowered to establish the same in their respective districts.

MR. D. J. GOGGIN.

HEAD MASTER OF WINNIPEG NORMAL SCHOOL.

The numerous friends of this gentleman will be glad to hear of the appointment of such a thoroughly competent man to the highly responsible position of Head Master of the Winnipeg Normal School. Next to the establishment of the Normal Schools themselves, the appointment of the teachers who are to train our teachers is of prime importance. Scholarship is necessary, but scholarship alone can do very little to the purpose unless accompanied by special aptitude for teaching and special preparation for normal work. To place untrained teachers at the head of teachers' training schools is so absurd that it needs only to be stated to be ridiculed.

In securing Mr. Goggin, the Manitoba authorities have placed their young institution under the care of one of the most enthusiastic and thoroughly trained teachers that could be selected. He began his career as teacher in 1868, as master of a genuine old skull-cap log school house in the township of Cartwright, Durham County. In 1869 he was appointed to the school in the village of Williamsburgh, the largest school in the township. During 1870 he attended the Whitby High School, of which Professor Kirkland, now of

Toronto Normal School, was then principal, and at the close of the year was appointed Assistant Master in the High School. The following year he was Head Master of the Millbrook Public School and held that position until midsummer 1873. At that time his reputation as a teacher of more than ordinary excellence was so well established, that he was selected as Head Master of the Port Hope Public Schools when they were separated from the High School. Here he had thirteen assistants, and a wider field for his talents. It is needless to say how well his distinguished success during the past ten years has justified the wisdom of the selection. Under his energetic and skilful management these schools have gradually risen to the very first rank in this province. In 1877 the County Model School was placed under his charge, and he has thus had already seven years' experience in the training of teachers. In this capacity his peculiar aptitude and talent for this important work have been more and more apparent and have secured him a reputation second to that of no other Model School Master in Ontario. He has enjoyed the fullest confidence of his fellow-teachers, who twice elected him President of the County Teachers' Association, of which he has always been an active and progressive member. His loss will be keenly felt in educational circles here where his faithful and efficient labors have been appreciated far beyond their immediate sphere. He will carry with him to his new field the hearty good will of every fellow laborer and friend of education.

Mr. Goggin holds the highest grade of Provincial Certificate and is an undergraduate of the fourth year in Victoria University. If energy, tact, and thorough training have not lost their ancient power, his future success is already assured, and his present appointment may well be an encouragement to every teacher to do solid work which is sure to stand like the pyramids—"all else is chaff, which let the winds drive where they will."

DEATH OF INSPECTOR BUTLER.

We mournfully record the death of another educationist departed from our ranks. Inspector Butler died early in March after a short illness with congestion of the lungs. In the prime of life with his mind in its full vigor he has been called from his work which has been faithfully done.

A. F. Butler, B. Sc., was born at Auburn, Ohio, Oct. 17th, 1833, and was consequently only a little over fifty at the time of his demise. He attended Auburn College in his youth, and began to teach school at the age of seventeen. In a few years he went to Hiram College and spent two years there under the tuition of the late President Garfield who commanded his respect and admiration. Afterwards he became a student at Ann Arbor University where he graduated as Bachelor of Science in 1859 and was married in the same year to Miss Augusta P. King, who now mourns his loss. After successful teaching at Brimfield and at Canton, Ohio, he came to Canada in 1863 and taught the Aylmer public school for four years, and the Fingal School for a short time. In 1868 he was appointed Local Superintendent of the public school, an office which he filled until 1871 when he was appointed first Inspector of Public Schools for Elgin under the new act. He has resided at St. Thomas ever since and was one of the best known men in the county. He was everywhere a welcome visitor both at the fireside and in the schoolroom, and his genial disposition made him many friends. A man careless of outward appearance, Mr. Butler carried beneath a somewhat rough exterior a warm heart and an active mind. He was a fluent speaker, and possessed some of the magnetism of quiet, commanding eloquence. In 1877 he wrote a history of the county of Elgin which exhibited his literary facility and his genial humanity. He was very fond of good horses and generally drove the finest he could purchase. He was a member of the Masonic Fraternity and also of the United Workmen and his family have the benefit of a $2,000 policy in the latter society. The sympathy of many warm friends will be extended to his sorrowing widow and to his mother who at the advanced age of seventy-six survives him at the old home in Auburn.

DEATH OF INSPECTOR DEWAR.

Contrary to the hopes of a large circle of devoted friends Inspector Dewar of Huron never rallied from the illness which prostrated him some months ago. He passed peacefully away from earth on the 26th of February. He leaves a widow, three sons and two daughters to mourn his loss. He will long be remembered throughout his late inspectorate where his name had become a household word and his genial presence had made him a welcome visitor. He was of Highland extraction and spent his youth in the county of Lanark, removing with his parents to the county of Lambton. At the Sarnia High School he received the first outlines of higher education from Mr. Walker, who was for many years the head master. He attended two sessions at the Toronto Normal School and received the highest grade of first class certificate. He taught the school in the village of Harpurhey for over ten years, and was principal of the Seaforth Public schools for many years previously to his appointment as Inspector of East Huron, a district including a vast area and about a hundred schools. Mr. Dewar was characterized by great earnestness of purpose and sincerity of character; he had an extensive acquaintance with general literature and was familiar with the leading theories of education. His whole life was an example of successful struggle against difficulties, and he goes to his rest honored for the faithful and conscientious discharge of his duties.

The annual Report of Inspector Tilley of Durham County is a model of care and thoroughness. It gives complete information regarding every school in the district and enables trustees and teachers to see at a glance just where they stand relatively to the other schools in the county. We find first the general remarks of the Inspector from which we give a few characteristic extracts in another column. Then follows a special report of five to ten lines on each school in the seven

townships, in which commendation of good work by teachers and trustees is heartily given, while shortcomings are faithfully yet delicately pointed out. Table A gives the replies to the questions :—How many times has the floor been scrubbed in 1883? Have the walls been whitewashed or tinted? Has woodwork been painted? Have any decorations been put up? What other improvements? This table shows general attention to the beautifying of school premises. Table B gives the results of the two promotion examinations. Table C classifies all the schools into four grades on the basis of efficiency, and Table D does the same thing on the basis of condition of school premises. Table E gives the legal qualification of the hundred and fourteen teachers, their respective salaries and the average attendance at their schools. Nearly eighty hold permanent certificates. The Inspector says: "There is one thing which especially characterizes our schools —the maintenance of good order without having recourse to severity.....mutual good feeling seems generally to exist between teachers and pupils."

REPORTS OF CASES.

There is no doubt that, with a right method and under proper conditions, "object teaching" is a very valuable agent in the intellectual development of the young mind. But as sometimes done, it is a nuisance, because it is a mere glitter of words and takes up valuable time. In a lecture upon the subject by Mr. J. H. Gladstone, of the London Royal Society, the following incident, showing how teaching with objects is very frequently done, is given :

"I have been told of a gentleman who used to teach science in schools; a friend of mine, who knew him, and did not approve of his method, and said so, was invited to come and witness its operation; whereupon he paid a visit to the school, and the teacher said, 'Here you can have botany, astronomy, physiology, or anything else. What would you like to ask my class about?' 'Suppose you take the solar system?' A diagram of the solar system was hung up, and on his pointing to different things his pupils explained the figure in the centre as the sun, the positions of Mercury and Venus, and so on. When he pointed to a particular circle, they explained that that was the orbit of Venus. The whole thing was gone through with in a very satisfactory way, and they gave pat answers to the questions of the teacher. The visitor then offered to put a few questions. He began by asking, 'What is an orbit?' None of them knew. They had used the word orbit, but did not know what an orbit was. 'But,' he continued, 'can you not give me something near it? Is it a coal-scuttle, or a flower-pot?' One little boy said, 'A coal-scuttle, sir!' That not being right, the rest of the class joined in saying that it was a flower-pot."

An officer had been sent to the house of a boy to inquire the cause of his absence. The officer, on his way back, met the boy and brought him into school. Soon after, the mother came to the building and told the principal that the boy was at home sick; he had been very ill the whole night, and she had had four doctors at his bedside. She was thanked kindly for the trouble she had taken to inform him of the serious illness of her son, and then the boy was called out and punished thoroughly for absenting himself from school without his mother's consent.

INTERMEDIATE AND SECOND CLASS, 1885.

LITERATURE.

ENGLISH. *Scott.*—The Lady of the Lake, especially Canto V.
Irving.—Rip Van Winkle.
LATIN. *Cicero.*—Cato Major.
Ovid.—Fasti, Book I., lines 1 to 300.
FRENCH. *Bonnechose.*—Lazare Hoche.
GERMAN. *Schiller.*—Belagerung Von Antwerpen, Der Taucher.

FIRST-CLASS GRADE C. 1885.

Shakespeare.—Coriolanus.
Scott.—The Lady of the Lake, especially Canto V.
Irving.—Rip Van Winkle.

FIRST-CLASS, GRADES A AND B. 1885.

Shakespeare.—Romeo and Juliet.
Chaucer.—Prologue and The Nonne Prestes Tale.
Pope.—Prologue to the Satires.
Addison.—Selections from his Contributions to the *Spectator*, made by J. Arnold under the headings, (1) Manners, Fashions, and Humors; and (2) Tales and Allegories. (Clarendon Press series.)
Wordsworth.—Sonnets in Matthew Arnold's Selection.
Macaulay.—Life and writings of Addison.
Books of Reference recommended :—Dowden's Mind and Art of Shakespeare, Gervininus's Commentaries.

DATE OF EXAMINATIONS, 1884.

Intermediate and Second Class.—Monday July 7 to Monday 14.
First Class Grade C.—Tuesday July 15 to Tuesday 22.
First Class Grades A and B.—Wednesday July 23 to Saturday 26.

ENTRANCE EXAMINATION JULY 3rd and 4th, 1884.

LITERATURE.

1.—SELECTIONS FROM ONTARIO READERS.

(1) The Norwegian Colonies in Greenland.—*Scoresby.*
(2) The Founding of The North American Colonies.—*Pedley.*
(3) The Voyage of the "Golden Hind."—*British Enterprise.*
(4) The Discovery of America.—*Robertson.*
(5) The Death of Montcalm.—*Hawkins.*
(6) Jacques Cartier at Hochelaga.—*Hawkins.*
(7) Cortez in Mexico.—*Cassells' Paper.*
(8) The Buccaneers.—*The Sea.*
(9) The Earthquake of Caraccas.—*Humboldt.*
(10) The Conquest of Peru.—*Annals of Romantic Adventure.*
(11) The Conquest of Wales.—*White's Landmarks.*
(12) Hermann, the Deliverer of Germany.—*Jerrer.*
(13) The Burning of Moscow.—*Segur's Narrative.*
(14) The Battle of Thermopylæ.—*Raleigh.*
(15) The Destruction of Pompeii.—*Magazine of Art.*
(16) The Taking of Gibraltar.—*Overland Route.*

2.—SELECTIONS FROM ROYAL READER SERIES.

(1) Stanzas from "The Princess," p. 13.—*Tennyson.*
(2) The Unwritten History of Our Forefathers.—*Mackenzie.*
(3) The Sky Lark.—*Hogg.*
(4) The Soldier's Dream.—*Campbell.*
(5) Goldsmith.—*Thackeray.*
(6) The Charge at Waterloo.—*Scott.*
(7) Harold Skimpole.—*Dickens.*
(8) "He giveth His Beloved Sleep."—*Browning.*
(9) The Black Hole of Calcutta.—*Macaulay.*
(10) Sunset Wings.—*Rossetti.*
(11) The Black Prince at Crecy.—*Stanley.*
(12) The Water Fairy.—*Swinburne.*

3.—SELECTIONS FROM CANADIAN READER SERIES.

(1) Ye Mariners of England.—*Campbell.*
(2) The Taking of Roxburgh Castle.—*Scott.*
(3) The Town Pump.—*Hawthorne.*
(4) The Cloud.—*Shelley*
(5) The Sagacious Cadi—I. and II.—*Household Words.*
(6) The Canadian Boat Song.—*Moore.*
(7) Dare to do Right.—*Hughes.*
(8) The Death of Wellington.—*Disraeli.*
(9) A Psalm of Life.—*Longfellow.*
(10) The Eve of Quatre Bras.—*Byron.*
(11) The Burial of Sir John Moore.—*Wolfe.*

Mathematical Department.

ELEMENTARY ALGEBRA.

1. Resolve $x^{16}-65536$ into five factors.
$x^{16}-2^{16}=(x^8+2^8)(x^4+2^4)(x^2+2^2)(x+2)(x-2)$.

2. Factor $729x^{21}+343y^{27}$.
$(9x^7)^3+(7y^9)^3=(9x^7+7y^9)(81x^{14}-63x^7y^9+49y^{18})$.

3. Solve $(x+a)(2x+b+c)^2=(x+b)(2x+a+c)^2$.

$$\frac{x+a}{x+b}=\left(\frac{2x+a+c}{2x+b+c}\right)^2$$

$$\therefore\ 1+\frac{a-b}{x+b}=\left(1+\frac{a-b}{2x+b+c}\right)^2=1+\frac{2(a-b)}{2x+b+c}+\frac{(a-b)^2}{(2x+b+c)^2}$$

$$\therefore\ \frac{1}{x+b}-\frac{2}{2x+b+c}=\frac{a-b}{(2x+b+c)^2}$$

$$\therefore\ \frac{c-b}{x+b}=\frac{a-b}{2x+b+c}.$$ Multiplying out and collecting,

$$i.e.\ x(a+b-2c)=c^2-ab.$$

$$\therefore\ x=(c^2-ab)\div(a+b-2c).$$

4. Which is greater $\sqrt{5}+\sqrt{14}$ or $\sqrt{3}+3\sqrt{2}$?
Squaring we have $19+2\sqrt{70} \lessgtr 21+6\sqrt{6}$.
Trans. and div. and Squaring $\sqrt{70} \lessgtr 1+3\sqrt{6}$.
$70 \lessgtr 55+6\sqrt{6}$. $15 \lessgtr 6\sqrt{6}$.
$5 \lessgtr 2\sqrt{6}$.
$25 < 24$. ∴ The former is greater.

5. Solve $\left(\frac{a+x}{a-x}\right)^2=1+\frac{cx}{ab}$.

$$\left(1+\frac{2x}{a-x}\right)^2=1+\frac{4x}{a-x}+\frac{4x^2}{(a-x)^2}=1+\frac{cx}{ab}$$

$$\therefore\ x=0, \text{ and } \frac{1}{a-x}+\frac{x}{(a-x)^2}=\frac{c}{4ab}.$$

$$\therefore\ \frac{a}{(a-x)^2}=\frac{c}{4ab}.$$

$$\therefore\ (a-x)^2=\frac{4a^2b}{c},\quad \therefore\ a-x=\pm 2a\sqrt{\frac{b}{c}}, \text{ or } x=a\left(1\pm 2\sqrt{\frac{b}{c}}\right).$$

6. Solve $\frac{1+x+x^2}{1-x+x^2}=\frac{62}{63}\cdot\frac{1+x}{1-x}$.

$$\therefore\ (1-x^3)=\frac{62}{63}(1+x^3).$$

$$\therefore\ \frac{1-x^3}{1+x^3}=\frac{62}{63}, \text{ or } 1-\frac{2x^3}{1+x^3}=1-\frac{1}{63}.$$

Hence $126x^3=1+x^3$, and $x=\frac{1}{5}$.

7. Solve $\left(\frac{x-a}{x-b}\right)^3=\frac{x-2a+b}{x-2b+a}$.

Put $x-a=k$, and $x-b=m$, and we have

$$\frac{k^3}{m^3}=\frac{k-(a-b)}{m+(a-b)}=\frac{k-(m-k)}{m+(m-k)}=\frac{2k-m}{2m-k}.$$

Since $m-k=a-b$. Clearing of fractions and transposing,

$$2km(k^2-m^2)=k^4-m^4,$$

$$\therefore\ 2km=k^2-m^2, \text{ and } k^2-m^2, \ i.e.\ (k+m)(k-m)=0,$$

$$\therefore\ k+m=0, \text{ and } \therefore\ x=\tfrac{1}{2}(a+b).$$

If we take $k-m=0$ we get $a=b$ which gives no root, since the equation then becomes the identity

$$(x-a)^3\div(x-a)^3=(x-a)\div(x-a).$$

From $2km=k^2-m^2$ we have by restoring values

$$2(x-a)(x-b)=(x-a)^2-(x-b)^2. \text{ Transpose and,}$$

$$(x-a)^2-2(x-a)(x-b)=(x-b)^2.$$

Add $(x-b)^2$ to both sides and,

$$\{(x-a)-(x-b)\}^2=2(x-b)^2=(b-a)^2,$$

$$\therefore\ x-b=\pm\sqrt{2}(b-a),$$

or $$x=b\pm\sqrt{2}(b-a),$$

which are the other two roots of the cubic equation

8. Solve $\frac{4x-17}{x-4}+\frac{10x-13}{2x-3}=\frac{8x-30}{2x-7}+\frac{5x-4}{x-1}$.

Divide each denominator into each numerator, cancel quotients and we have

$$-\frac{1}{x-4}+\frac{2}{2x-3}=-\frac{2}{2x-7}+\frac{1}{x-1}.$$

Add the sides separately, and

$$\frac{-5}{2x^2-11x+12}=\frac{-5}{2x^2-9x+7}.$$

$$\therefore\ 2x^2-9x+7=2x^2-11x+12.$$

$$\therefore\ 2x=5 \text{ and } x=2\tfrac{1}{2}.$$

9. Solve $(x+a)(2x+b+c)^2=(x+b)(2x+a+c)^2$. See No. 3.
Put $x+a=k$, $x+b=m$, $x+c=s$, and we get

$$k(m+s)^2=m(k+s)^2.$$

$$i.e.\ k(m^2+2ms+s^2)=m(k^2+2ks+s^2). \text{ Divide by } km$$

and $$m+2s+\frac{s^2}{m}=k+2s+\frac{s^2}{k}.$$ Cancel and transpose

and $$k-m=s^2(k-m)\div km. \quad \therefore\ k-m=0,$$

and $$\therefore km=s^2.$$ Restore the values of k, m, and s,

and $$x^2+x(a+b)+ab=x^2+2cx+c^2.$$

$$\therefore\ x=(c^2-ab)\div(a+b-2c), \text{ as before.}$$

Also notice that $k-m=0$, gives no root, since in that case $a=b$ and the equation becomes an identity.

10. Solve $\frac{x+2y}{3z}=\frac{z+2x}{3y}=\frac{y+2z}{3x}=x+y+z.$

$$\text{Each fraction}=\frac{\text{sum of all numerators}}{\text{sum of all denominators}}=\frac{x+y+z}{x+y+z}=1.$$

$$\therefore\ x=y=z=\tfrac{1}{3}.$$

INTERMEDIATE AND THIRD CLASS.—JULY, 1883.

ARITHMETIC, WITH SOLUTIONS.

1. Add together $\frac{3}{7}$ of £13, $\frac{1}{3}$ of $\frac{1}{2\frac{1}{3}}$ of $\frac{3}{5}$ of £2 12*s*, and $\frac{5}{7}$ of 9*d*.

Reduce 13*s* $4\frac{1}{2}d$ to the decimal of 19*s* 6*d*.

(*a*) $\frac{3}{7}$ of £13 = $\frac{1}{7}$ of £39. = £5 11*s* $5\frac{1}{7}d$.
$\frac{1}{3}$ of $\frac{3}{7}$ of $\frac{3}{5}$ of £2 12*s* = $\frac{1}{14}$ of £2 12*s*. = 3*s* $8\frac{4}{7}d$.
$\frac{5}{7}$ of $9d=\frac{1}{7}$ of $45d$. = $6\frac{3}{7}d$.
Sum = £5 15*s* $11\frac{7}{7}d$.

(*b*) $13\frac{4\frac{1}{2}}{12}\div 19\frac{1}{2}=13\frac{3}{8}\div 19\frac{1}{2}=107\div 156=.6858+.$

2. Find by Practice the value of 8596lbs. @ £10 18*s* $7\frac{1}{2}d$ each.

10*s*=£$\frac{1}{2}$	£ 8596	0*s*	0*d*	= price at	£ 1	0*s*	0*d* each.
		10					
	£85960	0	0	= "	£10	0	0
4*s*=£$\frac{1}{5}$	4298	0	0	= "	10	0	"
4*s*=£$\frac{1}{5}$	1719	4	0	} = "	8	0	"
6*d*= $\frac{2}{5}$ of 4*s*	1719	4	0				
$1\frac{1}{2}d$= $\frac{1}{4}$ of 6*d*	214	18	0	} = "		$7\frac{1}{2}$	"
	53	14	6				
	£93965	0*s*	6*d*	= price at	£10	18*s*	$7\frac{1}{2}d$ "

3. A person borrows $500 April 10th, and on June 22nd pays the the debt with $510.20. At what rate per annum was he charged interest?

Interest for 73 days on $500 = $10.20.
" " 365 " $100 = $10.20 = $10\frac{1}{5}$%.

4. A man having a certain sum of money to invest has an opportunity of purchasing 7% stock @ 95, but delays until it has risen to 110. What per cent. is his income less than if he had purchased at the first price?

1st income would have = sum ÷ $95\times 7=\frac{7}{95}$ sum.
2nd " " = sum ÷ $110\times 7=\frac{7}{110}$ sum.

Difference $=7(\frac{1}{95}-\frac{1}{110})$ sum $=\frac{21}{11\times 190}$ sum.

And, $\frac{21}{110\times 19}=\frac{3}{22}$ of $\frac{7}{95}$; but $\frac{3}{22}=13\frac{7}{11}$%.

5. At an international exhibition one country was awarded 5 gold, 9 silver, and 11 bronze medals; and another 4 gold, 15 silver, and 10 bronze. Find a ratio of values for such medals that these countries may be regarded as equally fortunate.

We have 5 gold + 9 silver + 11 bronze = 4 gold + 15 silver + 10 bronze.
Take 4 gold + 9 silver + 10 bronze from each and
1 gold + 1 bronze = 6 silver.

6. In a box there is a certain number of sovereigns, three times as many guineas, and twice as many marks (13*s* 4*d*) as guineas. Total amount in box = £815. How many coins of each kind are there?

$20s + 3(21s) + 6(13s\ 4d) = 163s.$
$815 \times 20 \div 163 = 100$ = number of sovereigns.
$\therefore$ 300 = number of guineas, and 600 = number of marks.

7. Find when first after 2 o'clock the hour and minute hands of a clock make an angle of 60 degrees with each other.
60 degrees = $\frac{1}{6}$ of circle = 20 minutes on face of clock.
$\therefore$ space to be gained by min. hand = 30 " "
It gains 55 min. spaces in an hour.
$\therefore$ " 30 " " $\frac{30}{55}$ of an hour = $32\frac{8}{11}$ min. past two.

8. For each of three succeeding months the population of a town rose 50%; and at the end of the third month was 2,700. What was the population at the beginning of the time?
($\frac{3}{2}$ of $\frac{3}{2}$ of $\frac{3}{2}$)pop. = 2,700, $\therefore$ population = 800.

9. Leap year is omitted once every century, except those centuries whose number is divisible by 4. What is the average length of a year?
In 400 years there will be 97 leap years and 303 com. years.
$\therefore$ average length $= (97 \times 366 + 303 \times 365) \div 400 = 365{\cdot}2425$ days.
$= 365$ days 5 hrs. 49 m. 12 sec.

10. A cube is formed of a certain number of pounds avoirdupois of a substance, and the same number of pounds Troy of the same substance. What proportion will a side of the cube bear to a side of a cube formed of the same number of pounds as before, but all avoirdupois? (175lbs Troy = 144lbs avoirdupois.)
1st cube cont. No. lbs. Troy + No. lbs. avoir.
i.e. $1\frac{4}{5}\frac{3}{5}$lbs. avoir. + No. lbs. avoir. = $\frac{319}{175}$ No. avoir.
2nd cube cont. No. lbs. avoir. + No. lbs. avoir. = $\frac{350}{175}$ No. avoir.
$\therefore$ Weights *i.e.* volumes are as 319 : 350.
$\therefore$ Sides " $\sqrt[3]{317} : \sqrt[3]{350}$.
Or as 6·832771 : 7·047298.

DALHOUSIE COLLEGE EXAMINATIONS.

JUNIOR MUNRO BURSARY COMPETITION, 1883.

GEOMETRY,

WITH HINTS AND SOLUTIONS.

1. Enunciate the axiom you employ in proving the main properties of parallel straight lines; and thereafter prove them.
The principle is Euc. ax. 12 or H. Smith post. 6. The chief properties of parallel straight lines are those stated in I. 29.

2. "If a straight line be bisected and produced to any point, the rectangle of the whole line thus produced," etc. Complete the enunciation, prove the proposition, and give its algebraic equivalent, with explanations.
Bk. II., prop. 6. For algebraic proof see Potts's Geometry, p. 101. A short proof of this theorem is as follows:—

A *C* *B* *D*

Sq. on *CD* = sq. on *CB*, the rect. *CB*, *BD*, the rect. *CB*, *BD*, and the sq. on *BD* (II. 4).
But rect. *CB*, *DB* = rect. *AC*, *BD*,
And rect. *CB*, *DB* with the sq. on *BD* = rect. *CD*, *DB* (II. 3).
Also rectangles *AC*, *BD* and *CD*, *DB* = rect. *AD*, *DB* (II. 1).
$\therefore$ Sq. on *CD* = sq. on *CB* and rect. *AD*, *DB*. See CANADA SCHOOL JOURNAL, November, 1879, p. 253, for short proofs of all the propositions of Book II.

3. On a given straight line describe a segment of a circle containing an angle equal to a given angle. Book III. 33.

4. If *a* and *b* units respectively are the lengths of the adjacent sides of a rectangle, find the area geometrically. Hence also deduce a rule for finding the area of a trapezoid.
See Hamblin Smith's Geometry, pages 95, 96 et segg.; Potts' Geometry, page 100.

5. Any chords of a circle are so divided that the rectangles of their segments are all equal. Find the locus of the points of section of the chords.
See Hamblin Smith's fig. 35, p. 166. Take *O*, the centre, and join it with the points of intersection *P*, *Q*, *R*, etc. It is easily shown that *OP* = *OQ* = *OR* = etc. $\therefore$ The locus is a circle concentric with the given circle.

6. Make a right-angled triangle with its base equal to a given line and its area equal to the difference of two given scalene triangles. To be done without the aid of any parallelogram.
Place the bases of the scalene triangles in the same straight line. Let x be one-half this line. Draw the perp. from each vertex to the base, and from the greater cut off a part equal to the less. Let y = the remaining part. From the extremity of x draw a perp. = y, and form the right-angled triangle, this triangle = difference of given triangles. If x be not = the given line, take a point, p, in x, or x produced, so as to make it = the given line. Join p and the vertex of the right-angled triangle already described. From the acute angle at its base draw a straight line parallel to the line joining p and the vertex, and meeting the perp. or the perp. produced in k. Join k and p, this is the hypotenuse of the required triangle. It is easily shown that the part it cuts off is equal to the part annexed.

7. *BAC* is a given angle. The extremities of *DE*, a line of given length, are in *AB* and *AC* respectively, while *DE* is pushed through its possible positions. Find when the triangle *DAE* is a maximum.
The areas of all possible triangles having the same base and vertical angle will be measured by half the rectangle of this base into the several perpendiculars from the vertical angles. Therefore the triangle will be a maximum whose perpendicular is greatest. It is easily shown that the perpendicular which bisects the base is the greatest possible, and that in that case the triangle is *isosceles*.

Correspondence.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR,—You would very much oblige me by giving correct answers to the following questions in the next issue of your JOURNAL:—(1) Can a teacher compel the trustees of his school to put a lock on the school door and on his desk? If so in what way? (2) Can a teacher hold the trustees responsible for any property of his either taken or destroyed through their neglect to furnish sufficient locks for the doors, etc.? (3) Is it unlawful for a teacher to punish a pupil by striking him anywhere excepting on the hand? (4) Is a teacher more liable to be punished for using a rawhide than any other instrument of punishment in school? (5) Is it requisite for a teacher to have a doctor's certificate for only a week's sickness in order that he can collect his salary in full? (6) Can a teacher collect his salary for any days lost through inclemency of the weather? (7) Is a teacher required to stay in school all day with only one pupil? (8) If there are no pupils present at nine o'clock to commence school with can the teacher close the school for that day? (9) Can the trustees compel a teacher to re-admit a pupil (whose presence is injurious to the school) after he has been suspended, without the approbation of the teacher? As I cannot find satisfactory answers to these questions in the School Act, and seeing some queries made by teachers and others in your JOURNAL, I take the liberty of asking you for answers to these as far as possible. And by so doing you will confer a great favor on one of your subscribers.

I have the honor to be, etc.,
Arnott, Feb. 18, 1884. M. C. H.

REPLIES.

(1) No; but if he has any tact he can easily get all he wants without compulsion. (2) No. (3) No; but the teacher who resorts to indiscriminate beating deserves to be fined. (4) Yes; if the teacher got a taste of the rawhide himself now and then he would soon see the inhumanity of using it. A soft strap, two inches wide and eighteen inches long, is the only instrument allowable, and the strokes should be on the hand and *on the hand alone*, and they should be counted whenever it is necessary to use the strap. The teacher who uses a rawhide has no case before a magistrate. (5) Yes. (6) Yes. (7) Yes; if the trustees insist on it, but surely very few trustees would be so absurd. (8) We should say the teacher should wait for half or three-quarters of an hour before closing the school. (9) The teacher can only suspend a pupil, he cannot expel without the consent of the Board. If the Board does not consent he must admit the pupil. But he may again suspend the pupil for a definite time if his conduct does not improve. We should say that a month would be about the extreme limit of a teacher's power of suspension. It is highly desirable for the Board and the teacher to act in harmony in all cases of discipline.

Special Articles.

READING AND ELOCUTION.

BY C. TURNER, C.M., LONDON, ONT.

The subject of this article is one that no teacher can afford to neglect, but which, nevertheless, has failed to command the attention it deserves.

Every one likes to hear good reading. Still, it cannot be denied, I think, that there are few really good readers amongst us. Many people, otherwise well educated, are sadly deficient in this respect. And even of those who claim to be the instructors of our adult population, such as ministers and lecturers, but few are able to read well even their own compositions, much less those of other authors. Indeed, the art of reading is sadly neglected in many of our universities, English public schools, and other seats of learning—so that while students may be eager enough to qualify for Matriculation, for Honors, for Fellowships, for Degrees, and other distinctions, the great majority of them take little or no pains to fit themselves for reading in public. If they can read for study ; read a favorite author for pastime ; read the daily papers ; read the current literature of the day as found in magazines and reviews, it is too often considered a sufficient accomplishment. Mathematics, Physical Science, Music, Drawing, Authorship, have their votaries, but the art of correctly, forcibly, and attractively rendering one's own thoughts, or the thoughts of others, is so seldom pursued for its own sake, that we are forced to the conclusion,—either that the public do not require good readers to entertain them, or readers themselves fail to see the importance of reading and recitation as an art. It is, therefore, the exception, and a very rare one, to the general run of readers, when we listen to the captivating eloquence and soul-stirring deliverances of a Macready, a Dickens, a Montgomery, or a Bellew. Thanks to the freedom of the Press, and the spread of education, we have, in both Hemispheres, many eminent scholars, scientists, artists, and divines, but the proportion, I repeat, of really good readers is lamentably small. Yet the school curriculum does not exist, I presume, in these days in which reading is not included as a part, and may be, an important part. I have examined the time tables and schedules of studies in many schools on both sides of the Atlantic, and have not yet met with any that excluded reading ; still the fact remains, that reading is *heard*, but certainly not *taught* in many of our schools as it should be.

So far, my remarks have had reference rather to the higher, and, as we say, better educated classes. Here we find culture, refinement, good breeding, and in short, the highest and purest forms of civilization. Is the charge of general deficiency in the power of good reading equally true of the lower orders of society? I believe it is. Speaking from my own experience I do not remember a single school in which reading was taught as a *specialty*. That is to say, there is not within my own recollection any school—night school, day school, private school, public school, college, or university, where reading received the same share of attention as mathematics, or arts, and sciences. Surely, you will say, this is a grave charge to make,—so I grant it is, nor is it ill founded, for, as I have said, I have carefully compared the results presented in Blue Books, Inspectors' Reports, Prize Lists, and other means of reference—such, in fact, as are open to any one of us ; and I am driven therefore to the inevitable conclusion, that, though the public are now-a-days *great* readers, they are not by any means what may be called *good* readers. They read *much* it is true, of both good and bad literature, but most of it is done mentally. Very few of us care to read *aloud*, either alone or in *company*. Hence public reading is too often out of the question.

My friends, is this as it should be? Both the English Government and the Canadian Government, and also that of the United States have done much toward remedying the evil I complain of, by providing Programmes of Instruction, in which reading is made to take an important part in every day's routine. The decree has gone forth—Every child must be educated and every child must *read;* and so important has reading been considered as an element in our school curriculum at home, that of the "three R's," as they are called,—Reading, Writing and Arithmetic,—reading has, for many years, been allowed to stand at the *head* of these elementary subjects. The Committee of Council on Education in Great Britain, has, through its responsible minister, the Vice President, so altered what we call Art. 28 from time to time, that reading, like other subjects, has been made more and more a test of the efficiency of a school—and wisely so, for, if children cannot read well, what progress can they be expected to make with the grammars, geographies, and other text books which are put into their hands? So that, if children are not now taught to read well, it is clearly not from any *unwillingness* on the part of your Government or ours. We have Governmental and Departmental sanction and prescription enough, and to spare, I might almost say ; yet I fall back on my original statement, and I say advisedly, our people, as a rule, are not *good* readers.

The question then arises—What is it that constitutes good reading? I will try to answer this as briefly and clearly as may be, and then proceed to enquire into the *causes* of this wide-spread fault in our educational system.

I confess I feel some little diffidence in finding fault with the way in which an important branch of school work is accomplished, and I trust I may be pardoned if I say anything at all calculated to discourage any of our number in the great and arduous labor in which we are all more or less engaged, but Holy Writ has declared, "Faithful are the wounds of a friend," and it is as a friend and adviser I wish to be considered. It is perhaps easier to say what good reading is *not* than what it is. For example,—it is not merely the correct pronunciation of the words, or a scrupulous attention to stops, or even a due regard to the laws of emphasis and accent ; it is not the rate—now fast, now slow—of delivery, as the case requires ; it is not the mere utterance of so many words in parrot-like fashion,—it is all these and more. A person's reading may be highly satisfactory in all these respects so as to please the most fastidious listener who requires nothing further, but *good* reading it cannot be called, for it lacks the soul, the fire, the nervous energy, the enthusiasm which catches the author's spirit, and, sympathizing with the listener, speaks from *heart to heart*. There is something in the kindling eye, the earnest tone, the spirited gesture of such a reader which chains the attention, and enlists the warmest emotions of the listener which is simply irresistible.

It is something more than "reading with expression" that we want. How is it that certain public speakers, lecturers, preachers, and others are called "eloquent"? Just because, in their addresses they have the power of working upon the feelings and persuading the minds of their audiences. It is not only that they are fluent and distinct and polished. Such a speaker invests the subject in hand with a halo of glory, so that the enthusiasm which is his has become yours and you lose sight of the man in the commanding flow of words and burning sentiment. There is, to my mind, no greater intellectual treat than to listen spell-bound to the fervid utterances of a really eloquent speaker. And *Elocution* is eloquent reading or recitation. There is the same charm in the one as in the other. Why is it that people, the most illiterate, as well as the highly educated, take so much delight in listening to plays, operas, and the like? It is not only the scenery, the dresses, the music,

and so forth of the actors, but because we see the genius of the author as it were reproduced, we see the action suited to the word, we listen to men and women who, having *studied* their part, and grasped its spirit, know how to impress it upon their audiences. An *actor* makes that seem *real* which is only apparent to the ordinary observer of the printed page, who only sees the words, but does not discern the *soul* that dwells in them. On the stage we have elocution in its most cultivated forms, but I see no reason why good reading, expressive reading, polished reading, eloquent reading, should be *confined* to the stage.

I can never forget the thrilling pathos and fiery enthusiasm which a former pupil of mine used to throw into his reading. His rendering before the whole school of such pieces as Byron's "Waterloo" has many a time chilled my blood, as, with the onward sweep of his eloquence, he has carried us in spirit to that bloody field, there to behold "rider and horse, heaped and slain in one red burial blent." While listening I lost sight of the boy and his name in what he was saying. So too, have I listened to the impassioned delivery of the late Rev. Morley Punshon, whom some of your readers may remember having heard in this country. His style of reciting the "Lays of Ancient Rome" was a treat never to be forgotten. His graphic rendering of the immortal lines describing how "in the brave days of old" the Roman heroes defended the bridge, was such that you could see the characters, the scenes, and the thrilling incidents of the struggle. I have said enough, however, to show that to be a truly effective reader, one must be perfectly natural—the reader must throw himself, heart and soul into his subject; and, other things being equal, his success is certain.

I do not, however, forget that it is not adults we instruct, but *children*. We cannot therefore be expected to produce results like these. Neither, perhaps, is it desirable that our boys and girls should be trained to be actors and actresses. The public do not expect it, nor is it practicable, if they did. The fitful attendance of many scholars, the incapacity of some, and the indifference of others, are all against us however much we may strive to accomplish great things, and I, for one, do not claim to have made any discovery of what might be done under more favorable circumstances. We must be content to take things as they are and make the best of them. All I contend for is, that, under existing circumstances our youth should be so instructed in the art of reading as at once to increase their general intelligence, and to cultivate their powers to the fullest extent. Is this reasonable, or is it Utopian? Is it not possible to produce better readers with the materials and means at our command? Is it enough for a boy to read or recite the "Charge of the Light Brigade" pretty much as a parrot might be taught to say it? Cannot a child be trained to read "Excelsior" or "Evangeline," "The May Queen," or an extract from Dickens or some other popular author in something of the style that would please the writer himself could he be present to listen? For my part, I believe it is. I have myself heard boys of some twelve or thirteen summers recite the "Evidence of Sam Weller," "The Conjuga ing Dutchman," "The Spanish Champion," an adventure at the "Natural Bridge of Virginia," and other selections, both grave and gay, in a manner which left little to be desired. Evidently, then, it *can* be done, and when done is always found to be productive of both pleasure and profit to all concerned. It only remains for me now to proceed to enquire into the drawbacks in our educational system which prevent us from accomplishing as much as we could wish in this matter. These are not far to seek:—

I have said this is an age of readers. It may also be fitly called the Examination age. This is a factor not to be lost sight of, for now, more than ever, requirements are being constantly increased, so that what children knew formerly is a very small portion of what they must now acquire. Their knowledge is tested and sifted so that little time is left for the due cultivation of reading as it should be. They must write, spell, compose, cast up accounts, and so forth,—all with a view of helping them to earn their livelihood. As for reading, an errand boy, a clerk, a boy behind the counter, need not be very proficient in the art. On the other side of the Atlantic the demand is for *technical* instruction; here, it seems to be for a *business* education; so that, provided a boy is expert in figures, and holds "the pen of a ready writer," he is in most cases considered qualified for any ordinary employment, as shop-boy, errand-boy, team-driver, or clerk. If his living depended on his *reading* powers, we may be sure he would not neglect the reading lesson any more than his daily bread. But the demand is not so much for readers, as for good writers and ready reckoners. Hence, much of the apathy I have complained of.

Then again, the range of subjects is so wide that but little chance is given for the thorough training good readers require. Two hours a day in the higher, and an hour and a half in the lower, is the very least that should be devoted to this subject, in order that every boy and girl may have *individual* opportunity given for practice. I am persuaded that less than this will not suffice to bring our children up to the standard of excellence I have marked out. Under the present *régime* can this be allowed? I fear not. All teachers will bear me out when I say, that to give a reading lesson *properly* requires no little patience and forbearance. I say *properly*, for of course time was, when teachers were content to *listen* without any attempt at correcting the mistakes of their pupils. But that day has gone by,—the teacher must now be ever on the alert. He cannot afford now to be merely passive,—simply the "figure head" of his class. He must be quick to hear, careful to point out errors, and firm in requiring the repetition by every child in the class, if need be, of the same sentence or passage, until it be done to his entire satisfaction. All this takes time. It may be a slow process, but it is thorough, and thoroughness pays in the end.

When the lesson is mastered in detail, it is a good plan to call upon one or more to stand out in front of the class, and read the lesson or portion of the lesson through—the class meanwhile being required to take note of the reader's attitude, his pronunciation, modulation of voice, and attention to stops. The class is thus actively engaged in listening critically. A little judicious questioning at the end will serve to bring out the faults, if any. Of course in the lower classes, where the *elements* are being taught, these remarks do not apply. But in *every* class a safe rule is—"little and well." You know the amount of time allotted for the lesson; let part of it be taken up by illustration on the blackboard, by explanation of words and phrases, so that the children get an intelligent notion of the subject matter. To read with expression, a child must first understand what he reads, and in order to do this, no lesson should be given without the aid of chalk and blackboard; so that the class may be taught through the *eye*, as well as the ear.

I have now pointed out a few of the drawbacks in our educational system; I have shown, very imperfectly it may be, what good reading is, and the causes why good readers are so scarce; I have also ventured to suggest a few hints for the proper treatment of a reading lesson, and if I have in any measure succeeded in throwing out a new idea or contributed anything that may be of service, I shall feel myself amply rewarded for my pains.

The teacher's work is often described as noble. It is also arduous and toilsome. If, however, we each act on Solomon's principle of doing everything with "all our might," not merely because our work is to be tested by inspection, but because we are doing what in us lies towards the enlightenment of the rising generation, we shall surely succeed. "In all labor there is profit." We may not live to see the full effects of our labor, but at least let it be said of each of us—"He hath done what he could."

THE WORLD'S CHEMICAL CONGRESS.

Somewhat more than a century ago the chemical elements determined to organize themselves into an association, the better to become thoroughly acquainted with each other as well as keep abreast of the times, especially in their own department. They could not but recognize and deplore the fact, they said, that seldom without the intervention of man could they be brought together, and when this was the case it was not always possible to preserve the most amicable relations. They determined, therefore, without further delay, to establish a new and better order of things, and for this purpose a general meeting of all the chemicals was immediately summoned. The assembly was to convene at the library of Dalhousie College, Halifax, N.S.; and I, as representative of the Practical Chemistry Class, was cordially invited to be present.

A few minutes before the hour, what a curious spectacle I witnessed! Oxygen, a middle-aged, portly-looking gentleman, entered the room. He was walking at a pretty lively rate and looked as if on very good terms with himself and all the world. Hydrogen, a young gentleman, next stepped along very lightly. Nitrogen soon followed, quite alone and apparently wishing to monopolize attention. I am told this is his usual habit; he seems to have no associates who really care for him, as it is their belief there is nothing in the man. His qualities are not promising, although he has an interesting family of five who follow closely behind. A word about one or two of these may not be out of place. The eldest is not of much account—like his father exactly. The second is, however, a lively chap and full of innocent fun. He is always laughing, and never happier than when he keeps others in a roar. The next two are not so well liked. (One of them, Hyponitric Acid, may be known by his ruddy color.) But the youngest is the best of all the boys. He is extremely useful and unflinching in the cause of right. There is not one of the richest or proudest of the metals—the very chemical *élite* in fact—with whom he will not come in contact if necessary, and will even attack the aristocratic Lord Gold himself, on which occasions, with a little help from his friendly neighbor Hydrochloric Acid, he has been known repeatedly to make his enemy disappear before you could say Jack Robinson.

And so they severally came along; it would weary you to tell all that was seen that day. Mrs. Carbon, an old lady with a large diamond ring on her finger, now hobbled up with the aid of a stick. Her two daughters accompanied her, Carbonic Oxide and Carbonic Acid, each in a blue dress of the latest fashion. In many respects these sisters resemble each other; they are both desperate flirts, and with their dancing steps dazzle many a poor man to destruction. The youngest, especially, has been the death of many by her treacherous arts.

The metals of whom mention has been made walked, I notice, pretty much by themselves, though they sometimes tried to edge closely to Mr. Oxygen, who, quieting each with his usual affability, seemed willing, if possible, to divide himself up among his friends.

But I must hurry on. The meeting, when some forty or fifty persons had arrived, was called to order. Oxygen, owing probably to his important standing in the community, was unanimously voted the chair. One crusty old fellow, Fluorine, seemed to disagree with this and did, it is true, move in amendment Hydrogen, which Squire Alcohol (or Spirits of Wine, Esq., as he preferred to be called,) seconded, but as he was partly in liquor this motion was not put. Thus were these two quietly overruled, the antipathy of each to Oxygen being notorious. Hydrofluoric Acid was made Secretary—he could (sk)etch and write pretty well, making use of a wax tablet that he pulled from his pocket; he performed his work as neatly as you or I could probably have done on paper. Iron was Treasurer. This position of trust he received, being a very useful person, a tenacious friend, and one to be depended upon at all times. No show or boasting about old Iron! Yet how could any one do without him? It being thought advisable to appoint a policeman, Mr. Silver was proposed, but some one fearing that, like his *confrères*, he might be rarely seen when wanted, and he himself declining the office, Lead acted instead, it being known that he could come down pretty heavy at times, as also his ability to run well might be of service. On a general committee served Chlorine, Potassium, Zinc, Tin, and a few others whose names I didn't hear.

The following constitution was then adopted, additions to be made by a two-third vote of members:—

1. This meeting shall be called the "World's Chemical Congress."
2. Its object shall be to benefit science and promote kindly feeling among ourselves.
3. A Convention shall be summoned, to take place once in a century (hereafter on the anniversary of the birth of our esteemed chairman), in the city that shall, during that time, do most to advance the cause of science.
4. Convention to meet alternately with closed doors. When the public accept our invitation to be present, they will be expected, individually or through delegations, to respond willingly and at once to any suggestion that we, as a body politic, may, for the good of the whole, propose.

(Here, I confess, I uttered a sound, for I could not help wondering what work in this direction might even now be assigned me.)

The chairman then rose and addressed the meeting. He thanked them for the honor done him, said that he was glad to see so many present, especially from among the younger members, as also some that lived, as many knew, at a great distance. He was quite aware it must have been difficult to so many to have put in appearance on so short notice, and the fact that they had done so argued well for the future interest they would take in the cause. He urged them all to proclaim boldly their (chemical) principles everywhere; they were members of a great and glorious Brotherhood, though in its comparative infancy; one that had in fact often rent the globe—(here a whole host of young combustibles, led by the Sulphides and Chlorates, started involuntarily to their feet)—and one that, with their united force, or even that of one alone, could wholly destroy it—(here Nitro-glycerine, taking the compliment to himself, so loudly applauded and gave such signs of excitement, that he had to be publicly reprimanded by the policeman, who, knowing him to be a dangerous and notorious personage, threatened to *lead* him into "durance vile" if he couldn't keep quiet. This for a time made him subside). Mr. Hydrogen, the Government M.P., was then called upon to speak. He alluded to the friendly relations that subsisted between the chairman and himself. They never ("well, hardly ever") clashed, but had always united for the promotion of the public weal. (Hear!) Did a city require water for drinking purposes? It was they that had laid their heads together until the refreshing fluid flowed in abundance. Had artificial light been required? Again they had done what they could to assist. It was by his almost unaided efforts (he mentioned this modestly) that for years the æronaut had been enabled to cleave the atmosphere, and he could adduce other instances to prove his use to the community were it necessary. In conclusion, he would earnestly beg each member present to make it a point of doing at least some one thing by which his fellows might be benefited. During the cheering which followed the door suddenly opened, and Drs. Antimony and Arsenic entered. These gentlemen were well-known physicians, of great celebrity. They expressed their regrets at not being able to have been present at the hour named, as they had been detained by a bad poisoning case that had just happened in Paris, (at this their

pale-faced assistant White, of Egg, looked whiter than usual, probably in recollection of the late sad accident, and even Litmus changed color.) Thereupon the Chairman suggested the propriety of a specimen sketch of testing for poisons being given, with diagrams, to which the surgeons kindly assented; and in a short time made the matter so plain that one or two young rascals present were heard to wish that some one might be found to experiment upon. Quicksilver, on hearing this, testified his willingness to procure a fit and proper person, having had experience in the like before, and being nimble-footed, began at once to run. This was going too far, and the meeting was again called to order.

To vary proceedings, a song was now called for. Hydrogen willingly responded, and by the aid of instruments and appliances of glass succeeded in a few moments in making a succession of agreeable sounds which were generally well received, though a few young ladies affected to be very much amused. Lord Gold asked permission to introduce a young friend of his, which request having been granted by the committee on introductions, Thallium, a young marquis who had spent his life abroad, was presented to the audience and requested to favor the meeting. On rising His Excellency said, *inter alia*, that he never remembered being in this country before, but on the occasion of this visit he was so prepossessed in its favor that he hoped that he should be able to spend much of his time in it in future. His Excellency was therefore heartily applauded and cordially welcomed to the platform.

The Congress was not without its laughable incidents too. I remember noticing particularly a young man, who looked as if he couldn't keep still a moment. He was wonderfully excited. Occupying perhaps the coldest part of the room, he yet seemed to complain everlastingly of the heat, and if he heard the slightest thing that differed from his own sentiments he flared up till actually I thought he would fire with rage. What a very inflammable young gentleman he was! All at once he suddenly disappeared, amid the laughter of the greater part of the audience. It seems that in one of his caperings he had gone pretty well back upon the window sill where he had been sitting. Some one (I believe it was that mischievous rogue old Nitrogen) had slily given him a little push, tipped him over, and here he was cooling himself in the large water butt just outside of the window. No one seemed sorry, nor did any one run to his assistance, all no doubt feeling that he was now in a very safe place. Overhearing two brother metals talking of him, I learned that his name was Phosphorus, a relation of Farmer Phosphate, of Phosphite Grange, and that when the fit was on him he was a most dangerous character.

The entertainment committee now stepped forward and said they would be happy to show the members a few experiments. This was well received, though Magnesium, a lad of about ten years, was bold enough to say, "Only give me a chance and I'll do as much in this way as the whole of you!" Aluminium, an Irishman, racily muttered, "Schist (just) wait till I come forward." Major Nitrate, of Strontian, and Colonel Crucible did most of the superintendence and exhibited beautifully colored flames and performed a number of interesting tricks with Pharaoh serpents, fireworks, &c., while between times they recited songs and told laughable incidents. Many a fair cheek blanched and grew pale as the gallant colonel related anecdotes of the war and the fire that he was often called upon to stand. Mineral Chameleon was also induced to act his part, which he did in his usual happy way and with his customary success.

The investigation committee here reported that application to join the Congress had been sought by the organic elements. This body set forth that they were virtually of the same stock as the other, though differing in some things and often separated, and on the principle of union being strength they felt they could be much more effective if united. They contended that a natural benefit might in this may be expected to result. The document was of considerable length and duly signed in proper form, Dowager Starch, Lady Chloroform, Mrs. Ether, and Miss Acetic Acid (a sour old maid) heading the list. Revds. Drs. Glucose and Glycerene, and Revds. Messrs. Chloral and Morphine had also signed their names. It was decided to grant the request and admit them all—their sisters and their cousins and their aunts, a numerous fraternity, and with a decided similarity in name—with the exception of Strychnine, Prussic and Oxalic Acids. The former was a butcher, a cowardly cruel fellow; the other two ill-fated wretches, according to the statements on oath of Drs. Analysis and Microscope, phrenologists of about sixty years, and who, from long experience and close observation could *test* pretty well. Further, it was shown that politically they were rabid Nihilists, wishing nothing to exist and always trying to destroy human organizations.

Old Mr. Copper, a shipbuilder here rose and said that as the evening was pretty well advanced, he would respectfully move that the other members be requested to be prepared to do their part by way of entertainment at next meeting, young Nickel, a jeweler, seconding the motion, which was at once carried. Names being solicited, Hon. Bismuth, M.P., an old member volunteered a speech; Calcium to perform a variety of sublime experiments; Lawyer Blowpipe, in a puffy, vigorous style, promised to exhibit the latest improvements in glass blowing; Sodium and Potassium, each an essay, prefaced by a short biographical sketch, while the useful and witty Sodium Chloride volunteered a composition of his own which he had carefully prepared. Ammonium mumbled something, it was hard to know what, but as he lived in dissipation it was thought best not to depend on him. Among the ladies, Mrs. Cobalt promised to exhibit some curious specimens of writing, and Miss Chromium her choice collection of paintings. A debate by four or five of the younger members was also provided for.

Arrangements, too, were made for the celebrated artist, Nitrate of Silver, to be present at the next session and photograph the congress at its early sitting.

The Secretary read an apology for absence from Earl Platinum, than whom none has greater weight and importance. The Earl telegraphing from South America, begged to forward his best wishes for the interests of their cause.

Sheriff Sulphur in a flowery speech proposed, and Farmer Silicion (a *Grit*) seconded, that the thanks of the meeting be tendered to the following parties:

1. The editor of the *Chemical World* for his gratuitous services.
2. The several travelling companies for their favors, being especially grateful that Judges Nitrogen-Terchloride and Fulmonite of Mercury, both of them shaky old gentlemen of a peculiarly choleric temper, had been carried along in safety, and
3. Mr. Oxygen, for the genial and able manner in which he has discharged throughout the duties of the chair.

I need not tell you that these motions passed unanimously.

The chairman in rising, according to custom, to make the farewell speech, said he begged to thank the meeting for the confidence they had reposed in him, as well as for their cordial vote of thanks. He testified to the good order and harmonious feeling that had prevailed throughout *(hear!)*, though a few young molecules and atoms had run about a little, one or two surly chaps, as Chlorine, Bromine, Phosphoretted Hydrogen, and Hydrosulphuric Acid, had with their usual disagreeableness endeavored more than once to interrupt proceedings in their own peculiarly offensive manner. He begged that the conduct of the last however more especially might be overlooked, as he was the most useful and important working agent the society had.

In conclusion, he stated that they would be asked to meet again (D.V.) a century hence, place and time to be definitely stated through the publication committee at a later date. After singing together the national anthem, dedicated to their patroness, the Goddess of Science, the members quietly and sadly dispersed. I regret not being able to give all the words of the hymn. I could only catch a few lines, Red Oxide of Mercury nearly precipitating me to the ground in his haste to get away, and my thoughts being with those who had been my companions, but who even now were rapidly departing. Perhaps by next session, in the year of grace 19—, some other friend of science may be more fortunate and be able to furnish the world with the complete anthem. The lines I remember something like these:—

"May each to other e'er prove true,
Do all the good that he can do,
And as the countless ages run,
Prove God and science ever one."

Jan., 1900. A. W. HERDMAN.

NOTES OF TALKS ON TEACHING.*

READING.—PHONICS.

I propose to speak to-day of the use of the spoken word in assisting acts of association between the idea and the written word. It is very often urged that the spoken word is sufficient to recall its appropriate idea, and thereby bring about an act of association between it and the written word. That, as the ideas are already in the mind of the child, the spoken word alone is needed to recall them. Those who hold to this doctrine fail to understand the great economy of mental action that is brought about by the stimulus of the object. Were I to teach you a foreign language, German, for instance, how much quicker and easier you would learn the words if I were to present the objects and speak or write their names. This is thoroughly understood to-day by the best teachers of modern languages. If we adults can learn a foreign language so much easier by the object method, it can be readily inferred how necessary the use of objects is to the little child. When the old habit of learning spoken words is carried over into the learning of written words, that is, after a hundred or more words have been learned, probably the spoken word will then be sufficient to bring about the required acts of association. When a child does not need the stimulus of objects, pictures, etc., then their use should cease. Any good teacher will not fail to observe when this time comes to the child. The spoken word, then, aids in recalling the idea, and at the same time names the written word. The spoken word is associated with the written word, so that it recalls the written, and the written recalls the spoken. Deaf mutes learn the written words without the intermediate help of spoken words, and it is found that with the use of objects these unfortunate beings learn written words with as much, if not greater, rapidity than the children who have perfect hearing. Notwithstanding this fact, the spoken word has a use in learning to read, but it may be badly misused. For instance, when it is associated with the written word alone, and the written word is not associated with the idea. In this case, the reading is not the getting of thought, and, therefore, not real reading, but simply mechanical word pronouncing without the slightest inspiration from the thought. There are methods of teaching reading, whose sole aim is to train children to pronounce words with little or no regard to the thought. To the casual observer the results seem surprising. To the real teacher they are the sounding of empty words. The use of the spoken word, then, in teaching reading, must be to assist in acts of association. To use them for any other purpose is a hindrance in learning to read. The question, then, is, How can spoken words be used to help associative acts? The spoken words have been acquired by the child before he enters school. He knows how to make every sound in the language, and to combine them in pronouncing all the words he knows. He has learned the spoken words as wholes, and is not conscious of the elementary parts of a word, although he can combine them without the slightest hesitation. The spoken word consists of the articulation of one elementary sound or a succession of elementary sounds. An elementary sound, with the exception of the sound of *h*, requires for its articulation a certain fixed position of the vocal organs. Change the position of the vocal organs, no matter how slightly, and the sound must change. Between a few combinations of two sounds the articulation continues, producing peculiar modifications of sound brought about by various positions of the vocal organs that they must take in changing from the position required by one sound to that of another. If, however, these glides were made between each and all of any combinations of the sounds of the language, the intermediate sounds would be innumerable. As it is, forty sounds are all that are given in making the spoken words of the English language. In changing, then, from the position of the vocal organs required to make one sound, to that of another, there must be, except in glides, an actual suspension of sound. In pronouncing ordinarily, these pauses between sounds are too short to be perceptible to the ear. Make these pauses perceptible, and we do, what I think is wrongly termed, spell by sound. As phonic analysis has nothing whatever to do with spelling, is oftentimes a hindrance rather than a help to English spelling, I prefer to call the act of articulating each sound with a perceptible suspension of the voice between two sounds—slow pronunciation, following the German term—*langsamer aussprache*. Now, it should be borne in mind, that in reality the spoken words alone are pronounced slowly, the written words cannot be. It is a mistake to say that certain letters have several sounds, several sounds are represented by one letter. The process by which a word is made to recall a spoken word, or a letter is made to recall a sound, is exactly the same as that by which the written word recalls the idea—viz., the process of association. When the first word is learned, the spoken word is associated with the written word. The spoken word and written word are learned as wholes. I have tried to show that the written word is fixed in the mind by writing it. That when one word, for instance, *rat*, is taught and written, the word *cat* can be more easily seen and more easily copied; for the word *cat* contains two thirds of the forms of the previous word. In this way we see that as the different forms are impressed upon the mind, the repulsion of the word, or the difficulty in grasping it is overcome, and successive associations made easy. In the same way the spoken word may be associated with the written words, so that the written words will recall the spoken with greater ease. As the written words become more clear in the mind, the separate parts of the written word may be associated with the separate articulate sounds, so that the difficulties in the acts of association may become less and less; that is, new words may be pronounced and known at sight. The great danger is, that children may be trained to the skilful pronunciation of words without knowing them. A word is only known when it recalls its appropriate idea.

There are two great obstacles in the way of the successful teaching of the so-called phonic analysis. One is more apparent than real, and that is, the fact that different sounds are represented by the same letter in the English language. In a purely phonetic language (which, by the way, does not exist), each sound is represented invariably by one character. If the English language were phonetic, it would greatly lighten the burden of learning to read and write. But a careful examination of the words learned by a child will show that the difficulties are not so great as they are often represented to be. If we begin, for instance, with the short sounds, a child may learn at least two hundred words that are purely phonetic to him. I have calculated and classified the words in thirty-nine pages of the New Franklin Primer, in the whole of Monroe's Charts, and in the first forty pages of my Supplementary Reader, First Book. There are 456 words in all; 205 of which are purely phonetic, 216 are words whose pronunciation is indicated by their form; and only the 35 remaining may be called entirely unphonetic. After a child learns this number of words he has formed a fixed habit of learning new words, and all active use of primary methods may cease. What, then, is the use of burdening the child with mangled and twisted print or diacritical marks? Phonics may be used as a great help in teaching primary reading, if the natural growth of the child's power is carefully followed.

The second difficulty in teaching phonics is found in the apparent opposition of the word and phonic method. The word must be learned as a whole, and any early attempt at word analysis simply

* Notes of Talks on Teaching, given by Francis W. Parker, at the Martha's Vineyard Summer Institute, July 17 to August 19, 1892.

retards the teaching. The struggle to analyze a new word, or to build it up from parts, as I have already explained, absorbs the attention and prevents the act of association. These two methods, that seem to be in direct opposition to each other, may be entirely reconciled by closely following well-known mental laws. The child, as I have said, knows how to make all the sounds in the language in their word combinations. He is not conscious of a single separate element. Obviously, the first step to be taken is, to bring these elements slowly to his consciousness. This may be done by training the child to pronounce words slowly (spell by sound). I have found by repeated experiments that the little child will understand me when I pronounce words slowly in a natural manner, nearly as well as when I pronounce in the ordinary way. The child may be trained by imitation to pronounce slowly with great readiness and skill. This should be carefully done before any direct association is made between articulate sounds and the word that represents them.

One of the greatest activities of the mind is the coming together of like to like. It may be called the law of analogies. It begins, as all good things do, in perfect unconsciousness on the part of the child, When a child says, "I seed," for I saw, and "I goed." for I went, the child is unconsciously following this law of analogies. The same law is in operation when the child spells all words phonetically, without regard to the absurdities of English spelling. Using phonics, in teaching reading, in the proper way, simply intensifies this law. If the word method were used, pure and simple, the child's unconscious mental activity would seek out and use the analogies of the language, in associating new written words with the same sounds he has learned to associate with them. When we teach words in phonic order, as, for example, rat, fat, cat, mat, sat pat, this law of like coming to like in the mind is made more effective. But when at the proper time the articulate sounds are consciously associated with the letters that represent them, we use this mental activity in the most economical way. Great care, however, should be taken not to force the growth of this mental action so as to conflict with the other and more important law of learning words as wholes. These whole words cannot be analyzed until they are clear mental objects. The process, then, of using phonics may be given thus: First, train the child to recognize words when pronounced slowly. This may be easily done, if the teacher pronounces slowly in easy, natural tones. The greatest obstacle that I have found in phonics is the inability of teachers to do this. Second, train the child to pronounce slowly by imitating the teacher's voice. All this should be done, as I have said, before any direct association of articulate sounds is made with written words. Third, after a few words are taught, let the teacher in writing words give each articulate sound as she makes the character that represents it. Do not require the children to imitate the teacher until they do so of their own accord. Fourth, have the children begin to pronounce slowly, without even a suggestion from the teacher, the words which she writes. Phonics may be thereafter used with great effect in teaching reading. Thus, you will observe, that by this process the spoken word retains its unity as long as it is necessary, and the way is carefully prepared for the conscious analysis of words when the proper time comes. This will be indicated by the child's own spontaneous action.

All new words, then, that come within the child's acquired analogies of sound may be readily associated with their appropriate idea with little or no aid from the teacher. Give the child the power to help himself as soon as possible, and at the same time please remember not to violate any known laws of his mental growth.

He who is the most slow in making a promise is the most faithful in the performance of it.—*Rosseau.*

Examination Papers.

UNIVERSITY OF MANITOBA.

PREVIOUS EXAMINATION, MAY, 1883.

Examiners:—T. C. L. Armstrong, M. A., LL. B.; Rev. O. Fortin, B.A.; Rev. Prof. R. Meiloche.

MACBETH.

1. State what you know of the history of Shakespeare's Macbeth, with dates.
2. Give proofs from the play itself that it is one of the poet's later productions.
3. What use does Shakespeare make in his plays of (*a*) irregular metres, (*b*) rhyme, (*c*) prose? Quote instances from Macbeth in proof of your views.
4. Scan the following lines, and paraphrase extract (*d*):

(*a*) *Ban.* "As far, my lord, as will fill up the time
'Twixt this and supper; go not my horse the better,
I must become the borrower of the night
For a dark hour or twain."
Macb. "Fail not our feast."
Ban. "My lord, I will not."

(*b*) "Authorized by her grandam. Shame itself!"

(*c*) "My thought where murder yet is but fantastical."

(*d*) "Let your remembrance apply to Banquo:
Present him eminence, both with eye and tongue
Unsafe the while, that we must lave our honors
In these flattering streams, and make our faces
Vizards to our hearts, disguising what they are."

5. (*a*) "'Tis safer to be that which we destroy,
Than by destruction dwell in doubtful joy."

(*b*) "Come, *seeling* night,
Scarf up the tender eye of *pitiful* day,
And with thy bloody and *invisible* hand
Cancel, and tear to pieces that great *bond*
Which keeps me pale."

(*c*) "Rather than so, come, fate, into the *list*,
And *champion* me to the *utterance*."

(1) Refer each extract to the speaker and tell the circumstances under which it was uttered.

(2) The first, (*a*), is taken as an instance of poetic irony. Explain.

(3) Explain the italicized words in each.

(4) Point out any rhetorical figures you detect.

6. Explain the grammar of the following extracts:—

"Whiles I threat he lives;
Words to the heat of deeds too cold breath gives."

"There's daggers in men's minds."

"The cloudy messenger turns me his back,
As who should say," etc.

"Of all men else I have avoided thee."

"I am in blood
Stepped in so far that, should I wade no more,
Returning were as tedious as go o'er."

7. Contrast the characters of Macbeth and Lady Macbeth, and show how the punishment of each satisfies the demands of poetic justice.

Time—Three hours.

ENGLISH LITERATURE.

1. Write a short note on the alliterative poetry of the Anglo-Saxon period.
2. Give some account of the English drama prior to the time of Shakespeare.
3. Contrast the German and the French influence on English Literature. Mention the periods when each has been felt, and some English authors who show the characteristics of each.
4. Name the chief classes of poetry and the characteristics of each class.

5. Write a note on the ballad in English Literature.
6. Characterize Wordsworth as a poet. Did he conform to his own canons? Name his chief works.
7. What are the great periods of English Literature? Tell the leading features of any of them.
8. Write a note on the progress of English prose, showing its various phases and some of the most distinguished prose writers.
9. Write a short essay on the nature and influence of the modern novel.

COUNTY OF PEEL PROMOTION EXAMINATIONS, APRIL, 1883.

ARITHMETIC.

FIRST TO SECOND CLASS.

1. Write in words:—1010; 7009; 62001; MDCCCLXXXIII; CMXLIV.
2. Write in figures:—Nine hundred and eight; six thousand seven hundred and one; and in Roman Numerals:—676; 1475; 893.
3. From 101608 take 4786 – 235 – 1386 + 48 + 36435 – 72.
4. Find the difference between 486923279 and 507843016.
5. A farmer had 14 horses, 16 more cows than horses, and 5 more sheep than the number of horses and cows together. How many animals had he altogether?
6. Willie had a hundred marbles, he lost 50, gave 5 to James, 9 to Tom, and 7 to John; how many had he left?
7. A lady bought 3 hats at $8 each, 6 pairs of boots at $4 a pair, 3 pairs of gloves at $2 a pair, and a dress which cost $35; how much did all cost?
8. A man paid $135 for a horse and $208 for a carriage. For how much must he sell them both to gain $86?
9. Set down the multiplication table of 4 times, 7 times, and 9 times.
10. John has 186 marbles; he wants to divide them among three boys. To the first boy he gave 47 marbles, to the second 19 more marbles than to the first, to the third the remainder. How many marbles did each boy receive?
11. Find the sum and difference of 876453 and 375674.
12. *A* owns 475 acres of land, *B* owns 96 more acres than *A*, *C* owns 847 acres, and *D* owns as much as *B* and *C* less 135 acres. How much land do they all own?

ARITHMETIC.

SECOND TO THIRD CLASS.

1. Find the product of 897650 and 65040.
2. Find the product of the sum and the difference of 5089 and 4879.
3. What would 120 geese cost at $1.37½ cents a pair?
4. How many cows at $45 each should be given for 480 sheep at $18 each?
5. How many lbs in a bushel of wheat? of oats? of barley?
6. Find cost of 4800 lbs of wheat at 95 cents a bushel; 1700 lbs of oats at 37½ cents a bushel; 3600 lbs of barley at 70 cents a bushel.
7. Solve by using factors; 876987 × 132, 768940 ÷ 96.
8. 87698745 ÷ 1883.
9. *A* and *B* have together $7200. *A* has $200 more than *B*. How many horses at $70 each could *B* buy with his share?
10. 18 chairs cost $72. What would 24 chairs cost at the same rate?

GEOGRAPHY.

SECOND TO THIRD CLASS.

1. What is a river? a lake? a river basin? a strait? an isthmus? a continent? an ocean?
2. Name two rivers of Peel, and the townships through which they flow.
3. In which river basin are Bolton, Alton, Streetsville, Brampton, respectively?
4. How would you go from Bolton to Brampton by railroad? from Alton to Malton? Keep within the county in both trips.
5. Name the county town of Peel, also its incorporated villages, and the townships in which they are respectively situated.
6. Name the High Schools in Peel and locate them.
7. In what part of the county is stone most abundant? Where would you find sandy hills? Where are there woollen mills?
8. Name the oceans and continents, and tell what oceans wash the coasts of North America.

COMPOSITION.

THIRD TO FOURTH CLASS.

1. Punctuate the following sentences, inserting capitals where necessary:—

three fishers went sailing out into the west
out into the west as the sun went down
each thought of the woman who loved him the best
and the children stood watching them out of the town
for men must work and women must weep
and theres litle to earn and many to keep
though the harbor bar be moaning

rev dr mcleod was editor of good words he died ad 1872 when hrh the duke of cambridge was conducting the review near london the shah of persia presented him with a sword.

2. Transpose into the natural prose order the three stanzas of "The Wreck of the Hesperus," beginning "Then up and spake an old sailor."

LITERATURE.

THIRD TO FOURTH CLASS.

(Pages 209 and 210 Third Reader.)

1. What is the meaning of 'solitude,' 'monarch,' 'sages,' 'divinely,' 'sallies,' 'cordial,' 'fleet,' 'despair,' 'reconciles'?
2. Tell what you know about Alexander Selkirk and about Cowper.
3. Verse 1, line 5—Why does 'Solitude' begin with a capital letter? Line 6—Whose face is meant? What charms had sages seen in it?

Verse 2, line 1—For what noun does 'I' stand? Line 3—What does he call 'sweet music,' and why? Line 6—What were 'tame,' and why?

Verse 3, line 4—For what nouns does 'you' stand?

Verse 4, line 4—What land does he mean? Line 7—To whom is this said?

Verse 5, line 3—How fast does a tempest go? Line 5—What is meant by 'arrows'?

Verse 6, line 8—What reconciles man to his lot?

HISTORY.

THIRD TO FOURTH CLASS.

1. Give dates for discovery of America, discovery of Canada, taking of Quebec, confederation of Canadian provinces.
2. For what is each of these men famous, viz.:—Jacques Cartier, Wm. Pepperell, Pontiac, Montcalm, George Washington, Frontenac, Marquette, Tecumseh?
3. Give the geographical position of each of the following places, and mention a historical event associated therewith:—Acadie, Montreal, Pittsburg, Niagara. Detroit, Chateauguay.
4. Who were the United Empire Loyalists?
5. In what respects does the Government of Canada differ from that of the United States?

ARITHMETIC.

THIRD TO FOURTH CLASS.

(Full work required; no credit for answers only.)

1. Find the sum of all the following numbers:—Six thousand and four, and eighteen thousandths; eight hundred and fifty, and six hundred and five ten thousandths.

Nine, and six thousand and fifteen millionths; seventeen thousand and six, and forty-seven hundred thousandths.

2. A goldsmith manufactured 2 lbs, 3 dwts. 8 grs. of gold into rings, each containing 9 dwts. 16 grs.; he sold the rings at £2 10s. each; how much did he receive for them?

3. Divide 228 lbs, 6 oz. 2 drs. 2 scr. by 76.
4. Define *measure, multiple, G. C. M., fraction, terms of a fraction.*
5. Simplify :—$682\frac{7}{8} - \frac{5}{8}$ of $\frac{4}{9} - 1659 + \frac{3}{5} \div 75 - \frac{1}{2}$ of $\frac{5}{6}$.
6. What is the smallest sum of money with which I can buy an exact number of pigs at £1 10s. 0d. each, or of lambs at £2 15s. 0d. each, or calves at £5 5s. 0d. each?
7. A man went to town and sold to a storekeeper 5 bags of potatoes, each containing $1\frac{1}{2}$ bushels, at 55 cents a bushel; $8\frac{1}{4}$ lbs of butter, at 20 cents a lb; and 66 eggs at 15 cents per dozen. He bought with the proceeds 25 yards of cotton, and had $3.36 left; what was the price of the cotton per yard?
8. Of what number is $3\frac{3}{4}$ the $\frac{5}{6}$ part?
9. Two trains start at 8h. 5m. a.m. from stations *A* and *B*, 450 miles apart, and approach each other, the former at the rate of 30 miles an hour, the latter at the rate of 42 miles an hour; when will they meet, and at what distance from *B*?
10 Prove that if the terms of a fraction be multiplied or divided by the same number, the value of the fraction is not altered.
11. *A* owned a farm of 240 acres, 3 roods, 4 perches, 10 sq. yds. He sold to *B* 59 acres, 3 roods, 6 perches, 18 yards, and divided the remainder equally among his three sons. How much did he give each?
12. Arrange in order of magnitude (greatest first) the following fractions :—

$\frac{2}{3}$, $\frac{3}{4}$, $\frac{14}{17}$, $\frac{15}{22}$, and $\frac{23}{31}$.

GRAMMAR.

THIRD TO FOURTH CLASS.

1. Analyze :—
   (*a*) In the basket he found two parcels.
   (*b*) Where was the little boy yesterday?
   (*c*) Finish your work before school time.
   (*d*) Oh! you hurt my foot.
2. (*a*) What kind of a sentence is each of the above.—Declarative, Exclamative, Imperative, or Interrogative? Give reason for your answer in each case.
   (*b*) Write another sentence of each kind.
3. Parse :—"This horse ran away yesterday and ran down the hill very fast."
4. Combine the following sentences into one simple sentence :—A fox saw some grapes. They were in bunches. The bunches were very fine. The fox was passing through a vineyard.
5. Correct errors in the following, giving reasons :—
   (*a*) That writing is done very good.
   (*b*) It was wrote last night.
   (*c*) He had came before I left.
   (*d*) Will we help you?
   (*e*) Was you or me there first?
6. Write :—
   (*a*) A sentence containing a noun in apposition.
   (*b*) One containing a predicate adjective.
   (*c*) One containing a noun in the possessive case.
   (*d*) One containing an adverbial phrase.
   (Underscore your example in each sentence.)
7. Write a letter to a friend describing the neighborhood in which you live, and the occupation of some of its people.

GEOGRAPHY.

THIRD TO FOURTH CLASS.

1. Define watershed, arctic circle, tide, delta.
2. What and where are Mississippi, Three Rivers, San Francisco, Regina, Notre Dame, Nelson, Ohio, Alleghany?
3. Name, in order, the States bordering on Canada and the Great Lakes; also give their capitals.
4. Draw a map of Ontario, showing the chief rivers and lakes, and the cities.
5. Give the position of the places named below, and state for what products they are noted :—Cariboo, Fraser River, Madoc, Goderich, Maryland, Ottawa, Black Hills, Petrolia, Georgia.

STRUGGLE ON.—Like it, or dislike it, this is the law, namely, that the teacher must either resolve and strive, or fail. There are no obstacles which will not go down before the fire and charge of enthusiasm and energy.—*Central School Journal.*

Practical Department.

BLACKBOARD WORK.

BY MISS ELLEN A. FOLGER, CONCORD, N. H.

In these days the blackboard has become an indispensable part of the school-room furnishings. I will speak of a few of its uses. We naturally think of it first as being used during recitations in arithmetic. Besides having pupils work out different examples on the board, I have found it a good plan to send the whole class to the board to work the same example. Suppose I am teaching any point in arithmetic and wish to see if it is understood, I send the whole class to the board, having beforehand seen that a supply of chalk and erasers is ready.

Some one may say, "I can't endure such a noise as the whole class will make in going to the board." Very well, assign to each pupil his permanent place, divide the class into sections and number each section, and have pupils take their places as the number of their section is called, each pupil can then quietly and quickly take his place. While the class are doing the work given out by the teacher, she has time to notice what each is doing, and to see the weak points. Some one may think that this gives pupils a good opportunity to copy a neighbor's work if they are so inclined. By being careful in assigning places to pupils this difficulty is almost overcome. It is wise to separate friends. Put the dull children where you can see their work easily, and where no bright one will be near whose work will be a temptation to dishonesty. Put the best scholars in such places that others can't easily see their work. If each pupil is working they will have little time to look around. Sometimes it is well to have alternate ones do the same work.

To get quick work it is a good plan to let the one who finishes first say one, the next two, and so on. If the teacher wishes to test her pupils on processes and not answers, it is an excellent plan to read examples to the class and have them express by figures and signs the operations to be performed. In this way, in a very short time, she can ascertain whether they grasp the relations which the different parts of the problem have to each other. The work of the whole class can be examined much quicker at the board than if they work on slates at their seats and the teacher goes round among them.

But arithmetic is not the only branch in which the blackboard is of use. In teaching language or grammar, whichever you choose to call it, it is equally useful. Suppose you wish the pupil to give you an interrogative sentence; many times the child will give you a correct sentence, but when asked to write it, will end it with a period. While it is often well to send the whole class to the board to write sentences illustrating some point, it is also a good plan to send part to the board and have the others criticise what is written.

In history, geography, or any branch that can be taught topically let part of the class write a topic on the board one day and part another day, if there be not time for all to write or recite in one day. Many mistakes in spelling, pauses, and capitals will be made at first; but train the class to correct the work, and an improvement will soon be visible. Hold the one asked to correct, responsible for all mistakes made in correcting.

While drawing on the blackboard is a good practice, I would not have the boards covered with drawings which are allowed to remain there for months. The blackboards should be for use, and not solely for ornament. Nearly every branch can be better taught by using the blackboard than without it, and it is equally useful in all grades. What is shown to the eye is usually better remembered than if only heard.

Although in many schools the blackboard is used too little, there is such a thing as carrying blackboard or slate-work to an extreme. It is well to accustom pupils to mental work with nothing before the eye representing the subject under consideration, for pupils can't always carry with them a slate and pencil.

The teacher must be careful not to keep her pupils standing too long at a time. I know of one teacher who used to tire her class exceedingly by her thoughtlessness in this matter. Twenty minutes is long enough to keep a class standing at a time. By a little care a teacher can so arrange the work that no one position is kept very long at a time.

The greatest objection to blackboard work is the chalk-dust. That is unavoidable, but it can be lessened by getting good erasers and allowing them to be used only at a given time. Otherwise some children will use them continually, and make much unnecessary noise and dust. Some noise is inevitable, but I agree with the one who said he "preferred the noise of activity to the stillness of death."

WHAT CONSTITUTES A TEACHER?

M. E. M.

Is a person fitted for the position of a teacher because he can pass the examination required to enable him to draw his pay in case he can secure a school? In far too many cases he is not, and ought not to attempt school work. It is one thing to be able to get the required knowledge, but a more difficult one to be able to impart it to others understandingly. Sometimes the ability to teach seems to be a natural gift, but that instinct of teaching that does not require cultivation, is very rarely found. The gift of teaching is not given to us as the bird knows how to build his nest, or the spider to weave his silken web, we are to learn it by experience and by constant efforts to be a better and more earnest teacher. Every one acknowledges the necessity of study in order to pass the *dreaded* examination; but this once over, too many teachers fail to realize the need of further study, forget to search for the best ways and means of reaching the child mind. As the success of our school depends mainly upon our own efforts, we need to make everything work to our advantage; if we fail to reach our highest expectations we become more earnest in our efforts.

In saying that the teaching gift is seldom a purely natural endowment, I do not call it of little importance, far from that, it is of the highest *importance*, and even with the most liberal talents and the best literary acquirements we often make failures in our work.

In the press of life's routine of duties, we too often forget the souls looking to us for guidance over life's difficulties. We all need the "growth of higher feeling within us, bringing strength to help us in our weakness." We are responsible for the kind and amount of preparation which we make before entering upon our work. We can not measure this responsibility when we consider that the material upon which we are to work is "jewels" of the costliest type, the structure we are to build is to endure through all eternity, and the influence of this structure is to be felt until time shall cease.

There are many faithful teachers in the land; they enter the school room and carry with them love for the work that transforms the dingy room into almost palaces. They are not satisfied with the achievements of the past, but read and think that they may be better workers; although they may not gain attention from the world, they are doing good work, and in after years, amid life's busy scenes, some one will say of their lives, I owe it to my teacher. Such a monument is more lasting than granite.—*The Moderator.*

THE TEACHER'S POSITION.

It is much easier to see the defects in any system than to suggest feasible remedies, and it is difficult for those who are not actually engaged in the work of teaching to appreciate fully the difficulties in the way of educating the masses. In all professions, except perhaps teaching, some credit is given to experience and professional training. If a man consults a lawyer, he gives the lawyer credit for knowing more about the law than he does, and he governs himself accordingly. So in medicine, the opinion of a physician is entitled to considerable weight. All other professions are treated with a like consideration. There is, unfortunately, in many communities a tendency to treat the educator differently. Many persons with no experience in the work of teaching, and without any appreciation of its difficulties, feel as competent as the most experienced and successful teachers to decide what the needs of the school are, what studies should be pursued or abandoned, and how schools generally should be managed. Years spent in careful study and investigation do not seem to command that consideration in teaching which they receive in other professions.

One of the suggestive lessons of the hour is the periodical election of persons to positions on school boards, who propose to revolutionize entirely the methods and workings of the schools. As a usual thing these revolutionary members, on a better acquaintance with the schools, take a very different view of the whole matter, and frequently become zealous champions of the schools. No more useful members are sometimes found on school boards than these very men.

What the schools need is intelligent and honest criticism. There is no doubt that there are many and serious evils connected with our present system of public schools. It is likewise true, with the crowded condition of our school houses, poor ventilation, absences of pupils from school, teachers appointed not for ability but for other reasons, meagre salaries, little inducements for men of ability to remain in the profession, that the results are at least commendable.

An encouraging sign is the healthy growth of public sentiment, and the prevalence of more rational views on educational methods. —*Educational News.*

PRACTICAL COUNSEL TO CANDIDATES FOR EXAMINATION.

Mr. J. G. Fitch, one of Her Majesty's senior Inspectors of Schools, in addressing the students of Stockwell College, said:—

"I cannot be unaware that the examination of next week is necessarily uppermost in your thoughts. A great deal of your professional success will depend upon the result of it. Being a person who in his time has been a good deal examined, and one, moreover, who has had a good deal to do with the examining of others, it may not be amiss if I give you a word of practical counsel. I have known well-qualified students fail to do themselves justice through want of attention to two or three simple matters. The knowledge which you have been diligently accumulating in the past years will not tell in the examination unless you can set out, clearly and concisely, the result of that acquisition on paper in a limited time. To do this it is necessary that you should have all your faculties at command. Now, no one is ever made calm or self-possessed by being told to be so, but there are two or three simple devices by which this end may be partly attained. In the first place, then, carefully read through all the questions before you begin to answer any; a little time spent in this way at first is time well-spent. Then I think it is a good plan to begin with the question which you feel

you can answer best. By the time you have come to the end of your answer you will be surprised to find how much of confidence and self-possession you have gained, and how much less formidable other questions appear. Before you attack any question study the terms of it carefully. An examiner generally takes pains to word his questions so that there can be no doubt as to what he does and what he does not want. But in reading examination papers I am often surprised to see how many very good answers are written to questions which are not asked. At first glance a question may seem like one you have seen before, or may seem to demand something which you know well; you begin hastily, and discover too late, or perhaps never discover at all, that your answer is irrelevant. I will give you an instance. At last year's examination this question was set in history: "Describe the causes that led to the American War, and some of the most important consequences that resulted from it?" A number of students plunged briskly into a full account of the American War. Perhaps they had recently had a lecture upon it. So Bunker's Hill, Lexington, the character of Washington, and I know not what besides, were discussed at length; whereas, you see, the examiner had advisedly set a question which did not ask for these details at all; but only for some of the previous and succeeding circumstances. I daresay that as he struck out answer after answer for irrelevancy he grew rather displeased, and, between ourselves, it is never very good policy to put an inspector into an ill temper.

THE NEW CODE AND OVER-PRESSURE.

The controversy turns mainly on the one accusation that there is great pressure in Elementary Schools, and that burdens too heavy for them to bear are placed on weak and dull children. The National Union of Elementary Teachers asserts this as a fact of wide application, the Department admits its truth in exceptional cases. "My lords are quite ready to admit that in the 18,000 Elementary Schools now receiving Parliamentary aid in England and Wales, as in all other places of education, instances of overpressure occur; and that in some cases more is required of individual scholars than they are able to accomplish." The important question is, Can the charge be fairly urged in the case of classes of children, or does it apply only to exceptional instances of dull and stupid children?

By the assailants of the Code it is urged that the percentage principle must, from the conditions under which it is applied, press heavily upon large classes of children. The ill-fed, ill-clad, badly housed, neglected children in large towns are to be counted by thousands; and yet the same standard of knowledge is demanded from them as from the well-fed, well-clad, well-housed, carefully-tended children of artisans and small tradespeople. On the side of the Department it is urged that "the course of instruction, under the Code, so far as it is obligatory, can be easily mastered by a child of ordinary health and intelligence," who attends regularly and is properly taught. It is hinted that teachers "fail to distribute the work fairly over the whole period of the scholars' attendance, or to teach diligently throughout the year," so that they are obliged to resort "to a system of special effort and preparation during the few weeks or months immediately preceding the Inspector's visit." From our own tolerably wide experience of schools, we must say that this charge is unjust. We have been often struck with the prompt alacrity with which teachers on the day after an examination have begun to prepare for that in the following year. We are convinced that, as a rule, they do their best throughout the year, although as the Inspector's visit approaches they become painfully conscious that unless very strong measures are taken a number of children must fail. They therefore work them up during extra hours, sometimes, we fear, at the cost of their own health as well as that of the children. We greatly fear that the requirements of the Code are as much in excess of what the very poor children can master, as they are below what children paying 6*d.* or 9*d.* a week could accomplish. The Department has not yet learned that classes differing widely from each other send their children to be taught at Elementary Schools, and that we never can have a thoroughly satisfactory Code until this is recognized. In defence of the Department Sir Francis Sandford says that there "is a mistaken, but apparently a common idea, that a sufficient grant is to be earned only by teaching a large number and variety of subjects." Some schools may have erred in this respect, but the mistake is not general: 481,723 children *failed* last year to pass in arithmetic, 383,198 in writing, and 228,453 in reading; only 185,137 were *presented* in specific subjects, and of these about a third failed.

The blame of irregular attendance the Department seeks to throw on teachers and managers, and especially on teachers. "With regard to irregular attendance, it should be borne in mind that this can be checked by nothing so effectually as by the co-operation of managers and teachers with the local authorities in the exercise of the compulsory power. That co-operation is often wanting." We believe, on the contrary, that managers and teachers do, as a rule, their very best to secure regular attendance. Many of them take infinite trouble to effect it. It is true that some teachers are more skilful and attractive than others, and that they can achieve results denied to those who have not their special gifts; but when the great majority work to the best of their ability, it is unjust to throw blame upon the less successful. There seems to be a notion abroad, and we fear that it is entertained in Whitehall, that poor people, with scanty means, liable to sickness, compelled to adapt themselves to the requirements of employers, can send their children to school as regularly as parents who have servants at command, and who never need the services of their children. The Department may mean by their implied censure that managers and teachers are to be blamed because they do not push the powers of compulsion to the extreme point which the law allows, by enforcing fine and imprisonment on the father of every child who does not regularly attend school. If that is the Department's idea of the co-operation which managers and teachers should give to the local authorities, we are not surprised that it thinks them wanting in their duty. On no other hypothesis can they be blamed, and we cannot but think that they would set the country in a flame if they so carried out the law.

We do not doubt the anxiety of the Department to adapt its demands to the fair requirements of the country; we have every confidence in the uprightness and equity of the Inspectors; but it must be remembered that whilst their occasional visits may enable them fairly to test the literary progress of the children and the discipline and manner of conducting the schools, it gives them no clue to the difficulties which children have to conquer in order to attend school and to the obstacles thrown in the way of their learning, by poverty, starvation, frequent removals from school to school, and the incessant demands made upon their time by the exigencies of home life. —*School Guardian (Eng.)*

THE TEACHING ART.

In glancing at the reports of the various normal schools one turns naturally to see what specific work is done by each to prepare the pupils to become teachers. Some normal schools take this position at the outset: there is no such thing as teaching one how to teach. In other words, they deny that teaching is an art. This reduces every such school to the position of a high school, and no small number are merely such.

Others give lectures or talks to the pupils that have some relevancy to school-room work; the subject of moral influence is the one usually discussed. But even in these schools the main thing is to drill the pupils in text book knowledge. The principal is: Rouse the pupil to self activity and he will be a good teacher.

A very few normal schools attempt to teach the art of teaching. They discuss the principles of the art daily until a firm foundation is laid in the pupil's mind. This is one source from whence real teachers come.

There is another source. Out of a thousand young men and women who began to teach ten years ago, and who for twelve months wasted the time of their pupils, a number saw they were really blind leaders of the blind. Some determined to come out of their darkness. Continuing to teach and to search for light, they stumbled upon certain rules of action at least. They found at least that when certain things were done in a certain way, the pupils were interested and got their lessons. Some having more of the scientific spirit than others (the scientific spirit being the desire to classify like objects) found fixed principles to guide their action. It is from this source the large part of the skilful teachers of the country have sprung. And in spite of the increase of the normal schools, from that source most of the skilful teachers are to come, for the schools have increased faster than the normal schools.

Thousands of teachers possess no acquaintance with the art of teaching, with them it is the art of hearing lessons. The young man who graduates as a physician is quite likely to follow as dull a routine as the teacher. He concludes a patient has malaria and prescribes quinine, or that he is bilious and prescribes blood-root and sinks back into his old self again.

To acquire the art of teaching, the pupil must set to work to study daily and hourly the mode by which the mind acquires growth. Suppose a man had never heard of elimination of one of the unknown quantities of an equation; suppose he considers the matter, tries experiments, he will, if he goes on, reach at last the three modes by which it is done; then in solutions he will apply one or other of these. It is in this way the mind must work in attacking the problems of teaching.

The teacher has been told that spelling is to be taught by arranging the pupils in rows ("toeing the line" usually), and beginning at one end to "put out words" until all the words have been spelled. The thoughtful teacher will ask, *Why* do I do this? What is it to learn to spell? What position does the word stand in, in relation to the idea? etc., etc.

The questions that could be asked about this very simple (?) matter will set the teacher to thinking; many knotty questions will present themselves. But the teacher must ask and must answer them. In the same manner he will take up the subject of number. In this way he laws a foundation for the art of teaching, and it is the only way.—*N. Y. School Journal.*

LESSON ON COMMON OBJECTS.

BY E. J. HALLOCK.

WATER.

Specimens and apparatus required: A pitcher of water and two glasses. If convenient, obtain a bottle of salt water, one of hard water, and another of rain water; also some of dirty water and lime water, together with some salt, sugar, soap, charcoal, sand, filter paper, ice.

The teacher may begin the lesson by pouring some water into the glass and asking each of them in turn, or all in concert, to name some of its properties. "What can you tell me about water?" is a good form of question. Tell nothing, but hear everything, and try to draw out such answers as these:

Water is a liquid; it has no color, no smell or taste, is cold, is wet, is heavy.

Then you may ask them if they can see through it, and tell them that such things are called *transparent.*

What shape is it? Pour it into different vessels to show that it will take any shape, but is always flat on top. All liquids do this. If you can borrow a carpenter's level, it will interest the class still more.

Fill the glass even-full of water, then insert one or two fingers and ask, "*Why does the water run out?*" A little talk over this will lead them to discover that two things cannot occupy the same space at the same time. If the class are old enough one of them may be told to write the word "impenetrability" on the blackboard.

What is water good for? Among the answers will be to drink, to wash in, perhaps the boys will say to fish or swim in.

Throw some salt in the water and when it has disappeared ask *where* it has gone. Some will be sure to say it has *melted;* tell them that is not the right word, and after a while, if no one can give the correct word, tell them it has *dissolved.* All through the course care must be taken to prevent the use of *melt* or *fuse* where *dissolve* is intended. The subject of solution can be made very interesting.

If you can't see the salt how do you know that it is really there? Take two glasses exactly alike, fill each half full of water, put salt in one and not in the other; then turn your back to the class and change them so they will not know which has the salt in it, and on placing the glasses before the class ask them to find out (not guess) which is which. Some one will probably think of tasting, and may be allowed to do so. Taste, then, proves the presence of what we cannot see in this case. After a considerable quantity of salt has been dissolved in the water, evaporate a little of the solution to show the class that you can get back whatever has been dissolved in it. A teaspoon two-thirds full of the brine may be heated over any kind of lamp and in a few minutes the water will go off and leave the salt, which will begin to snap and crack (decrepitate). Another proof of a substance in solution is obtained by evaporation.

Continue adding salt and show that a limit is soon reached where the water will not dissolve any more; it is saturated; it can be compared to a person who has eaten his fill and can eat no more. The experiment may be repeated with sugar, but only a small quantity of water should be taken, as sugar is very soluble. They will notice that some things are more soluble than others.

Throw some clean sand in a glass of water; it soon settles. *Is it soluble?* of course not. Stir in some clay or any earth that is near at hand; it does not dissolve nor does it settle.

How can we get it out? Some one may say, strain it; and this can be done. A piece of filter paper (to be had of any druggist or photographer), is cut to a circle folded twice to a quadrant, such as is formed by the hands of a watch at 3 o'clock, (also at 9 o'clock), and on partially opening it, it will fit in a funnel; wet it to keep it in place and open the pores. Through this the muddy water may be filtered; a portion, and sometimes all of the dirt will be removed. Show them that salt and water cannot be filtered out. *Why not?*

Dissolve hard white soap in water until it will not take any more; if it forms any flocks or sediment filter it, or strain it. Put it in a bottle and label it "soap solution." Fill a small bottle half full of rain water, then pour in a very little of this soap solution, and shake it; call attention to the foam. In another bottle put some *hard* water, drop in the same quantity of soap solution and shake it; no foam will appear until a good deal more of the soap solution is added. (If naturally hard water is not easily obtained, add a little lime-water to ordinary water, and use this for "hard water.") Try to make soap suds with hard water, and show how difficult it

is to do so. (If the class are quite young omit the hard water paragraph.) A piece of boiler scale or some "fir" from the inside of a teakettle may be exhibited at this point, if to be had.

What is ice? How can we change ice into water? Water into ice? Effect of heat on ice ; on water. Boil some water and hold a cold plate in the steam and let some condense on it. Ask what becomes of water when it "boils away."

Procure a clay pipe with as long a stem as possible,—some are ten inches long. Fit the bowl over the neck of a small, thin bottle or phial containing some warm water and caulk it with wet paper, or, better, a piece of an elastic band. This forms a rude still, or retort, and several drops of distilled water can be obtained by warming the phial very carefully. (Try this beforehand.) Set the bottle on a sand-bath, made by putting a little dry sand in any small tin dish, or the lid of a baking-powder box, and support it upon three long spikes driven in a block of wood, so that it will be high enough to slip a small alcohol lamp under it. (If a test tube can be had it will need no sand-bath.) The object of the sand-bath is to distribute the heat evenly, but much heat is wasted.

An alcohol lamp can be extemporized from a low, flat bottle, such as an ink bottle, or vaseline bottle. Fit a cork, bore a hole in it, and put in a small tube of glass or metal through which to pass the wick. The tube of a metallic penholder, or the end of a wooden one will answer, and can be made to cut its own way through a soft, thin cork. If you succeed in heating the bottle without cracking it, and the pipe-stem is kept cool, distilled water will drop from the end of it. (Explain *distil.*) By attaching the bowl of the pipe to the spout of a five-cent teapot, by means of a cork, better results are obtained, but the class cannot see it as well.

What is rain water? Where does it come from? How does this differ from distillation? Why and how does a pitcher of ice water generally "sweat?" Is the *steam* on the kitchen window on a cold day distilled water?

Evaporate some distilled or rain water, and show that there is no residue left. Melt some clear ice and evaporate this also.

Put a few drops of black ink in a glass of water, or enough to make it look dirty. Filter this through the filter paper ; if it is not clear put some fine sand in a funnel, and on this some charcoal finely powdered. Pour the inky water on this and it will soon run through clear. Repeat with red ink, or red wine. For older classes enlarge upon the importance of filtration for drinking water.

Pour some alcohol in the water ; it disappears. *Has it dissolved like the salt?* How do you know that it is still there? The class will answer, "taste it," but you can tell them there is another way, namely, "smell it."

Pour some kind of oil on water and shake well, asking what will happen. As it comes to the top, ask them to explain it. *Has it dissolved like the alcohol? Why does it float?* They will notice that water dissolves some liquids and not others.

If you can obtain some alcoholic tincture, or strong spirits of camphor pour some in water. It is milky. Camphor is insoluble in water.

Pour some alcohol on a plate and set fire to it without telling what it is, and ask, *Is that water? Why not? Will water burn?*

Drop a lighted match or splint in water. *Why does it go out?* Speak of the use of water to extinguish fires.

Rub a very little grease on a pane of glass—the perspiration of the hand will often suffice—and show that water will not wet it, but forms *round* drops.

Hold any vessel of cold water, which is dry on the outside, over the flame of the alcohol lamp ; it becomes covered with dew or drops of water. Even when there is no water in the alcohol this will take place. The water has been *made* from something in the alcohol, and something in the air. It would be going too far to explain how, but it may be stated incidentally, that water is always made by burning oil, gas, or candles ; and that this is why the windows of toy shops are often so covered with water in winter evenings that it is impossible to see through them.

Drop into water various small articles such as pins, beads, pebbles, nuts, and pieces of wood and paper. *Why do some float and others sink?* After a while they will conclude that whatever is lighter than water will float.

Is water heavy or light? What does a pint of water weigh?

This involves the use of a scales, also weights and measures. Leave this for the next lesson, telling them to try and make some scales, and if they cannot you will show them how, next time.—*N. Y. School Journal.*

WHAT TRAINING-CLASSES SHOULD HAVE AND DO.

(1) They should have lessons,—not lectures, alone,—on physiology and psychology, learning to observe and to analyze their observations ; to find principles and to apply them ; to discover motives, tendencies, and incentives ; to doubt themselves and to accept truth. (2) They should study plants and animals in their life and learn to nurse them. (3) They should become familiar with the history of education, of human thought, and of human progress, in clear and distinct outline, so that in their work they may consciously aid thought and progress. (4) They should learn to handle Frœbel's gifts in all directions, and to invent and use new occupations. (5) They should *observe* in a model kindergarten, and give clear accounts of their observations.—*American Teacher.*

—This journal is an earnest advocate of a speedy reform in our present absurd system of spelling. It believes that by a wise concert of philologists, authors, and intelligent people generally, even a single generation may witness vast improvement. But we must ask our ultra-reformers in this country not to forget the wisdom of "making haste slowly." All reforms are necessarily ahead of the age in which they arise. Let the spelling reform avoid the danger of getting so far ahead of our day that the people will find themselves hopelessly behind. It will be enough for one generation—nay, for two or three—if the twenty rules of the American Spelling Reform Association be adopted and thoroughly used. The time has not yet arrived for the adoption of a new alphabet. And no new alphabet can ever find favor that has not the prime requisite of the same simplicity of form that now distinguishes our present letters. No such complex and un-English forms as we see in the *Fonetic Techer* will ever be favorably considered. They are open to the same serious objections as are the German characters, to which physicians attribute much of the eye-disease so widely prevalent among German students. There is a strong tendency in Germany to adopt our alphabet ; let us not make the serious blunder (under the guise of reform) of introducing new characters which shall be neither simple nor easily distinguishable from those already in use. If we must have a new alphabet of forty-six characters, the ingenuity of man is surely capable of inventing twenty new characters simple in structure, and not too closely resembling the old letters. —*The Pacific School Journal.*

Publishers' Department.

NOTICE TO CLUB SUBSCRIBERS.

In counties where Association Clubs are formed to subscribe for the CANADA SCHOOL JOURNAL the subscriptions should be sent to the secretary of the association for transmission to us ; for as he has to keep account of the payments, and in nearly every case to supplement the subscription rate required of each member by an additional amount from the association fund, it confuses matters considerably when club subscribers remit direct to us.

While on this topic we may take occasion to thank very sincerely the numerous secretary-treasurers in the Province who have already sent us lists of subscribers for 1884-5. The prospects of the JOURNAL for this year are, so far, extremely cheering and encouraging. Its success depends on the teachers, and as it is published in the interests of the profession we hope they will not only subscribe themselves but also induce local friends of education to become subscribers.

Notes and News.

ONTARIO.

In consequence of ill health, J. A. Clarke, M.A., B.Sc., has resigned his position as head master of Smith's Falls High School. He has been succeeded by S. Burwash, M.A., of Cobourg.

After the change in the law with reference to the licensing of teachers in 1871, no perceptible change in the staff of teachers was seen for about five years. During this period the older teachers who had been teaching under the former law gradually passed out of the profession. Then followed a transition period of about another five years, during which very many of our schools were in charge of young and inexperienced teachers. Many of those young teachers have remained in the profession, have passed through the Normal School and have obtained permanent certificates. Two-thirds, if not three-fourths of the teachers at present employed in the county, have had as much experience in teaching as the majority of those who were employed twelve years ago, have been very much better trained and hold higher certificates. With a proper appreciation of their services by the public, and by the payment of liberal salaries to all who do good work, the annual waste should be fully provided for by the regular supply from the County Model School.—*Mr. Tilley's Report.*

Some time since we noted the necessity for a new high school building in Orangeville as the two rooms now occupied by the high school pupils are part of the Model School building and are too circumscribed and inconvenient—requiring two teachers with their classes in one room. We perceive that the Board of Education intends to build a new high school.

The University of St. Andrew's has conferred the degree of Doctor of Laws on Mr. Sandford Fleming.

Mr. Robert McCausland, Principal of the Bathurst St. Public School, Toronto, was charged in the Police Court recently, with assault on one of his pupils, a boy named McIntosh. From the evidence it appeared that the boy was very insubordinate, and that the Principal when punishing him did not use the strap, which is the recognized *modus operandi*. The magistrate referred the matter to the School Board who reprimanded Mr. McCausland and also issued instructions to all the principals of the city schools to use the strap only as a means of punishment when necessary. Mr. J. L. Hughes, City Inspector of schools, said the proper course for the teacher was to have suspended the boy and reported the case to him (the Inspector).

Dr. J. G. Hodgins, Deputy Minister of Education, visited Hamilton lately and expressed himself much pleased with the manner in which the "fire drill" was performed by the children attending the Central school.

CANADA SCHOOL JOURNAL.—The last number of this useful educational publication contains a variety of excellent and appropriate articles, original and selected, which those for whom they are intended will highly appreciate. The *Journal* opens with a paper on "William Crocket, A.M.," which is illustrated with a well-defined and life-like portrait. In addition to the usual subjects of a purely scholastic interest provision is made for a free interchange of opinion on educational matters. The correspondence department is a good idea.—*Canada Presbyterian, March 5, 1884.*

We are pleased to note the high stand taken by the Flesherton Public School at the Intermediate and Entrance Examinations. Its present efficiency is entirely due to Mr. M. P. McMaster, the energetic Principal. Mr. McMaster has now entered on his sixth year as head master of the school, with a highly creditable reputation as a successful teacher. He is at present preparing a large class for the Entrance and Intermediate examinations next July. His popularity is vouched for by having been successively the Vice President, the President, and is now the Secretary-Treasurer of the South Grey Teachers' Association.

The next examinations for entrance to the Collegiate Institutes and High Schools is appointed by the Educational Department to be held on Thursday and Friday, 3rd and 4th of July.

In the Mitchell public school the other day a number of boys were playing with a red hot poker. One of them, either by accident or otherwise, ran the end of it into the eye of a son of Mr. James Sills, and it was thought destroyed the sight. The attending physician, however, has now some hopes of saving the sight.

It is reported in the papers that the schools of Kingston have been so crowded that pupils have had to sit on the floor and on window sills. This is a clear case of the *Trustees' Cram* to which we called attention a few months ago.

Mr. Samuel McColl, of Dunwich, has been appointed by Mr. A. J. Leitch, Warden of Elgin, interim inspector of public schools for Elgin, in place of the late Mr. A. F. Butler, and will hold the office until next June. The selection of a permanent inspector rests with the County Council. Mr. McColl was formerly superintendent of schools in West Elgin.

Much has also been done in the way of improving the condition of the school room. But much still remains to be done before the school rooms become what they should be, viz: models of tidiness, order and taste, which shall permanently influence for good those who assemble in them day by day. The influence of precepts and maxims may be great, but the influence of personal contact must be far greater, and the daily contact with order and neatness will be a powerful agent in directing and moulding the character of the child. It is to the teacher mainly that we must look for this. The trustees may provide school houses, desks and all school requisites, but the teacher is like the engineer who directs the machinery and keeps everything in order. It is but poor encouragement for trustees after having properly supplied their schools to see the fixtures too soon destroyed, the fence become dilapidated, and the whole school premises show but too plainly the absence of proper care and attention. I should like to see much more done in the way of ornamenting and decorating school rooms. Many teachers have done all that can be desired in this direction; some have done a little, and some have done nothing whatever. This is something in which the pupils should be associated with the teacher. Children acquire habits of neatness and order by the daily practice of the same. And the teacher who gives proper attention to these things in the school room and insists upon their observance is a true friend of the child. It is a true saying that a youth's manners shape his fortune, and the cultivation of taste and proper deportment may be equally as beneficial as the knowledge obtained from books.—*Mr. Tilley's Report.*

Mr. George McMurrich, chairman of the Committee on School Management has, through Inspector J. L. Hughes, intimated to all the teachers in the Public Schools of Toronto, that with the view of preserving a record of the many *humorous incidents* connected with the work of the school-room in our city, and at the same time cultivating the literary abilities of the teachers, he will, at the close of the present year, give a first and a second prize for the best two collections of anecdotes, written by teachers and describing actual occurrences in our public schools. Teachers need not confine themselves to the present year, but may describe any events in their teaching experience in Toronto. The excellence of the stories, and the ability shown in relating them, will both be taken into account in awarding the prizes.

After four examinations have been held and the results made known they can no longer be regarded as an experiment, and I now wish to ask you, as the representatives of the people, to consider the question carefully and decide whether they shall be permanently established or discontinued. I had full confidence in their usefulness at the beginning, and this confidence has been well sustained by the results. They have developed a much deeper interest in school work among both teachers and pupils; they have directed and have helped to unitize the teaching in the different schools, and have secured proper attention to all classes and to all the subjects of the prescribed programme. By placing a direct object before teachers and pupils they have developed a healthy stimulus, and by the testing of the work each half year have afforded a pretty accurate test of the thoroughness of the work done. They have also been very beneficial in training pupils to express themselves properly in writing and to do their work with neatness and accuracy. I regard this as one of their most important functions which cannot be estimated too highly, and the results and improvement during the past two years have been very satisfactory indeed. Early in December of the present year, I sent out another circular in which, among other questions, I asked the following: (1) Do the promotion examinations continue to develop interest in school work among the pupils? (2) Do you wish these examinations to be continued? I have received replies from every teacher in the county, and all, without a single exception, have expressed their approval of them, and have expressed a desire for their continuance. Many teachers were not satisfied to merely answer in the affirmative but expressed this approval and desire

in most emphatic terms. Such a hearty and unanimous verdict of endorsation from such a respectable and intelligent body of educators as is found in this county is very gratifying indeed to me, and it affords me the most sincere pleasure to be thus assured that I have been able, with the hearty co-operation and assistance of the teachers, to devise and put into successful operation a system of promotion examinations which meets with such general approval, and which is accomplishing in so satisfactory a manner the results for which it was intended.—*Mr. Tilley's Report.*

The salary of Mr. Ford, one of the staff of St. Thomas collegiate institute has been recently increased. He has now $700 a year.

The Committee of Management of the St. Thomas Board of Education recommended that fire drill be held at stated intervals in all the schools of that city. The Board has adopted the recommendation.

Dr. J. G. Hodgins, Deputy Minister of Education, held an investigation lately in Simcoe County which has revealed the fact that candidates for examination were able to obtain the question papers previous to the day of examination, by abstracting them from the Inspector's office. As a result of the inquiry the certificates of twenty-eight teachers who were implicated have been cancelled.

We are continually showing the evil effects resulting from the use of pernicious literature by the youth of this country. Recently we read in the public press the record of a forgery committed in Montreal by a boy in whose home a large quantity of dime novel trash was found. Still later we find a boy shooting his schoolfellow with a revolver in the streets of Toronto as they were returning from school at dinner-hour. It is rumored that in Lindsay also two school boys have been badly wounded by shots from revolvers which they were handling. Firearms are the right sort of equipment for a "boy detective," juvenile "Jesse James," or youthful "Buffalo Bill," and so long as such dangerous weapons are allowed in the possession of inexperienced and incautious youth, just so long will this preventable mischief occur. But that is not all. We find that teachers—in the city schools especially—are so harassed by the insubordination and impertinence of these youthful bravados that they are compelled to resort to drastic measures to reduce the boys to subjection; and because the punishment is considered severe by the over-indulgent, unwise parents, the teachers have to account to their respective Boards, or to the magistrate, for their efforts to correct the evil created by foolish leniency at home, or lack of proper supervision. The importation of filthy books is prohibited by law, and it is time that legislation stepped in to put an end to the introduction into the country of a class of literature just as bad, if not worse; the reading of the former creates disgust and is seldom continued, but the latter has a tendency to arouse an insatiate mental thirst for morbid excitement which frequently upsets the reason of those who read it. We think that the question "What means should be taken to suppress the circulation of pernicious literature among our youth?" might form an interesting and advantageous topic at the ensuing Teachers' Conventions.

The East Huron Teachers' Association have invited Professor Melville Bell, the well-known elocutionist, to give a lecture on elocution, interspersed with a number of his choice readings, at the evening entertainment in connection with their convention to be held at Blyth on the 15th and 16th of May.

The Legislature has granted power to Toronto University to confer the Degree of LL.D. as an honorary degree and without examination. If the University never exercises this power nobody will be hurt. The multitudinous horde of nondescript doctors is not seriously in need of increase.

MANITOBA.

The Board of Education, at its session on February 6th had before it applications from Prof. Bryce and James Campbell relative to the use of an additional set of reading books for the Province. It was unanimously resolved that, "Whereas in December, 1881, the present series of reading text books was adopted for use as being at that time considered the best and still give satisfaction, therefore, in view of the expense and annoyance to parents that would follow frequent liability to a change, it is inexpedient at present to adopt any new series."

The appointment of a principal for the Normal School, in consequence of the resignation of Mr. E. S. Byington, was then taken up. From the inquiries made by the Superintendent, by the direction of the Board, the Board was led to the conclusion that Mr. D. J. Goggin, Head Master of Model School, Port Hope, Ont., was eminently fitted for the position. He was therefore appointed by a unanimous vote, his duties to begin on April 1st, 1884, and to consist of the conducting of local model schools for third class teachers from that date until November, when a five months' session will be held at Winnipeg for the training of first and second class teachers.

Arrangements were made by which the Superintendent is empowered to permit rural trustees to dispense with summer vacation when their circumstances may require it. Committees were named also for the selection of suitable Scripture readings for use in schools and for assigning special literary work in connection with the ordinary reading exercises of each day.

The Protestant School Board for the city of Winnipeg made their half-yearly visitation to the city school on Friday, February 8th. Besides the Board and Mr. Fawcett, the Inspector, a number of guests were invited, including the Superintendent of Education, Mr. J. B. Somerset, Archdeacon Pinkham, Professor Hart, Canon O'Meara, D. Agnew, and others. After driving round to the various schools and observing their orderly and neat appearance, lunch was partaken of at the Queen's Hotel, and an adjournment made from that to the Education Offices on the invitation of the Superintendent. Mr. Stewart Mulvey then took the chair and the afternoon was spent in listening to addresses from the visitors, the members of the Board, and others. A feeling of great satisfaction was shown at the condition of the city schools and the determination to support them in a fitting manner noticed by the speakers.

The Government being about to move from the present departmental building to the parliament building now just completed, it is intended to afford the Board of Education and the Senate of the University accommodation in the vacated building. This will supply a long felt want, the present offices being quite inconveniently situated, besides being poorly arranged. The proposed arrangement will also place a suitable room for the reception of the University library, the bequest of the late A. K. Isbister.

The Premier, during his late visit to Ottawa in the interest of the Province, pressed strongly the necessity of the school lands being made more immediately available for the support of new and struggling districts, the present being the occasion when more appreciable benefit can be derived from the help this source of income can bring, than any other.

Rev. Prof. Hart, as one of the inspectors of high schools for the Province, visited lately the Collegiate Department of the Portage La Prairie school. He expressed himself as having been gratified to find a considerable number of students studying the subjects of that department, and giving evidence of the painstaking and successful instructions of their teacher, Mr. Houston, B.A.—*Manitoba Free Press.*

NOVA SCOTIA.

The Board of School Commissioners of the City of Halifax has adopted the following resolutions in respect to school privileges for colored children:

1. That a suitable building of two departments fully equipped for school purposes be erected in a locality most central to the colored population of the city, to be used in lieu of Lockman street and Maynard street schools.

2. That the colored children properly graded, be admitted to said departments.

3. That any colored children who shall pass examination on the subjects of grade 7 in the prescribed course of study for common schools, shall be admitted to any corresponding departments in the common schools, such examination to be conducted by the supervisior.

4. That any colored boy who shall pass the examination for the high school shall be admitted to the high school on the same conditions as other pupils.

5. That special attention be given in the colored schools to the subject of sewing for girls, and to the most practical teaching of school studies, such as book-keeping and the use of mechanical formulæ and industrial drawing.

The Board has also decided that the annual examination of the Common Schools be held on the 21st, 22nd, 23rd, 24th, and 25th of April, instead of being extended over the whole month of April and portions of June and July as in former years.

The *Chronicle* thus summarizes the Report of the Superintendent of Education:

The sixth annual report of the Superintendent of Education was submitted to the legislature on Monday. It is gratifying to learn from it that the record for the past year shows a marked improvement in the attendance and general working of our public schools. More money has been appropriated for the erection of new school buildings than in any previous year, while as a general thing, better methods have been adopted for imparting instruction with satisfactory results in a majority of cases. Perhaps the surest indication of increasing interest and a desire to secure the fullest benefits of our educational system is furnished by the fact that there has been a considerable advance in the average salaries paid to teachers of all grades. The necessity of making the profession as remunerative as its high character and important functions deserve has been too frequently overlooked hitherto. It is therefore a hopeful sign to find the people in different sections appreciating in due measure the advantages of systematic training which have happily been placed within the reach of all. The very small number of sections without schools during any portion of the year is another encouraging feature.

The Provincial Normal School is reported as very efficiently carrying out the objects of the institution in giving a thorough training to those under its care. The fact is evident from the relatively large number of graduates who were licensed last summer. Of the one hundred and twenty-five students enrolled in the Normal School, Colchester furnished 35, Cumberland 23, Hants 12, Kings 11, Annapolis 10, Halifax 5, Pictou 5, Guysboro 5, Digby 3, Queens 3, Inverness 3, Yarmouth 2, Victoria 2, Richmond 2, Antigonish 1, New Brunswick 1. Eighty-two diplomas were awarded, including three of grade *superior*, forty-four of *good* and thirty-five of *fair*.

"County Academies," the report says, "were in operation during the year in all the counties not having special academies within their limits. The high school department of the model schools at Truro is conducted as a county academy for the County of Colchester. The academic department of St. Francis Xavier College, in which a very excellent class of work is done, continues to sustain by arrangement with the public school trustees a similar relation to the County of Antigonish." In this connection the Superintendent refers to a plan formerly submitted by himself for the reconstruction of the present system of academic education. He gives it as his opinion, which will doubtless be shared in by many others, that decisive steps should at once be taken to secure for the grants to that branch a more judicious and equitable distribution than is obtained under the prevailing method.

The reports of the Inspectors for the various districts are as full as usual. They speak, on the whole, very favorably of improvements which have been effected and suggestions which are being acted upon by the people for the advancement of their educational interests. Yet it is also quite evident that much remains yet to be done. There are prejudices, as well as indifference, to be overcome in many places before real progress can be looked for. It appears that the Act making attendance at school compulsory, in such sections as choose to adopt it, has not received the attention which it would seem to merit. It is somewhat remarkable that reference is made to that subject by six Inspectors only and they give it very brief mention. They state that the new law has been adopted in quite a number of sections under their jurisdiction, and that a fair test will be given to its practicability. While it is not doubted that wherever its provisions are fully understood and properly applied, the results will be largely beneficial, it is as yet too early to speak with any certainty as to its present working.

D. A. Murray of the Graduating class of Dalhousie. has been chosen to fill the post of classical instructor in the Dartmouth High School. Mr. Murray holds a Grade A Provincial License, and in 1882 was a Senior Munro bursary in Dalhousie College, which he has held for the past two years.

The next ensuing session of the Teachers' Association of Inspectoral District No. 4 (Counties of Annapolis and Digby) is to be held at Bridgetown, Annapolis County, on the 1st and 2nd of May.

Over-examination and over-inspection are among the most deadly evils of the present day. The fussy officials, who are never content to let things go on at their natural pace, but who are continually pulling up the corn to see how it is growing, are the evil spirits of the educational world. Supervision is one thing but the modern species of continual distrust is quite another. It is no new thing to say so in our own columns, but the truth is not always thrust so plainly before the public as it ought to be. It is not the teacher only who suffers by this continual inroad of the many-headed interferers with the natural progress of the school; but the public also are affected by the arts which are the accompaniment in regard to the instruction of the young.—*Schoolmaster.*

A NEGRO'S PRAYER.—A teacher in one of the colored schools at the South was about to go away for a session, and an old negro poured out for her the following fervent petitions: "Go afore her as a leadin' light, an' behind her as a protectin' angel. Roughshod her feet wid de preparation ob de Gospel o' peace. Nail her ear to the Gospel pole. Gib her de eye ob de eagle dat she spy out sin far off. Wax her hand to do Gospel plow. Tie her tongue to de line ob truf. Keep her feet in de narrer way and her soul in de channel ob faith. Bow her head low beneaf her knees, an' her knees way down in some lonesome valley where prayer and supplication is much wanted to be made. Hedge and ditch 'bout her, good Lord, an' keep her in the straight and narrer way that leads to heaven."—*Ex.*

Readings and Recitations.

A GREAT INHERITANCE.

Let the boys remember that this great world, with all its wealth and woe, with all its mines and mountains, its oceans, seas, and rivers, with all its shipping, its steamboats, railroads, and magnetic telegraphs, with all its millions of men, and all the science and progress of ages, will be given over to them—boys now assembled in school-rooms, or playing without them, on both sides of the Atlantic, will soon control them all. Let them look abroad upon the inheritance, and get ready to enter upon its possession. The kings, presidents, governors, statesmen, philosophers, ministers, teachers of the future, are all boys.

Boys, be making ready to act well your part. Become good scholars. Read only what is instructive. Spend no time with trashy novels. Study science and government, and the history of the world. Study agriculture and mechanism. Become as nearly as possible perfect in the occupation you may choose. Learn prudence and self-control. Have great decision of character. Take the Bible for your guide. Become familiar with its teachings, and observe them. Seek wisdom and prosperity from your heavenly Father. As you grow in stature, in bodily strength, and in years, grow in piety, in intelligence, in caution, in activity, in firmness, and in charity. Aspire to be men of the noblest character. Cherish the feeling that you were born to receive good and to do good. Be manly in spirit and in action.

NEVER SAY FAIL.

In life's rosy morning,
In manhood's firm pride,
Let this be your motto,
Your footsteps to guide;
In storms and in sunshine,
Whatever assail,
We'll onward and conquer,
And never say fail!

WHAT BOYS ARE WANTED.

Boys of spirit, boys of will,
Boys of muscle, brain, and power,
Fit to cope with any thing;
These are wanted every hour.

Not the weak and whining drones,
That all trouble magnify—
Not the watchword of "I can't,"
But the noble one, "I'll try."

Do whate'er you have to do
With a true and earnest zeal;
Bend your sinews to the task;
Put your shoulder to the wheel.

Though your duty may be hard,
Look not on it as an ill;
If it be an honest task,
Do it with an honest will.

At the anvil, on the farm,
Wheresoever you may be,
From your future efforts, boys,
Comes a nation's destiny.

TWO WAYS.

Where two ways meet the children stand,
A fair broad road on either hand;
One leads to Right, and one to Wrong,
So runs the song.

Which will you choose, each lass and lad
The right or left, the good or bad?
One leads to Right, and one to Wrong,
So runs the song.

THE LIGHT-HOUSE.

High o'er the black-backed Skerries, and far
To the westward hills and the eastward sea,
I shift my light like a twinkling star,
With ever a star's sweet constancy.
They wait for me when the night comes down,
And the slow sun falls in his death divine,
Then braving the black night's gathering frown,
With ruby and diamond blaze—I shine!

There is war at my feet where the black rocks break,
The thunderous snows of the rising sea;
There is peace above when the stars are awake,
Keeping their night-long watch with me.
I care not a jot for the roar of the surge,
The wrath is the sea's—the victory mine!
As over its breath to the furthest verge,
Unwavering and untired—I shine?

First on my brow comes the pearly light,
Dimming my lamp in the new-born day,
One long, last look to the left and right,
And I rest from my toil—for the broad sea-way
Grows bright with the smile and blush of the sky
All incandescent and opaline.
I rest—but the loveliest day will die—
Again in its last wan shadows—I shine!

When the night is black, and the wind is loud,
And danger is hidden, and peril abroad,
The seaman leaps on the swaying shroud;
His eye is on me, and his hope in GOD.
Alone in the darkness, my blood-red eye
Meets his, and he hauls his groping line.
"A point to nor'ard!" I hear him cry,
He goes with a blessing, and still—I shine!

While standing alone in the summer sun
Sometimes I have visions and dreams of my own,
Of long-life voyages just begun,
And rocks unnoticed, and shoals unknown;
And I would that men and women would mark
The duty done by this lamp of mine;
For many a life is lost in the dark,
And few on earth are the lights that shine!—*Good Words.*

HOW MOZART DIED.—Wolfgang Mozart, the grand composer, died at Vienna, in the year 1791. There is something very touching in the circumstances of his death. His sweetest song was the last he sang—the "Requiem." He had been employed on this exquisite piece for several weeks, his soul filled with inspiration of the richest melody, and already claiming kindred with immortality. After giving it its last touch, and breathing into it that undying spirit of song which was to consecrate it through all time, as his "Circean strain," he fell into a gentle and quiet slumber. At length the light footsteps of his daughter awoke him. "Come hither," said he, "my Emilie. My task is done, my 'Requiem' is finished." "Say not so, dear father," said the gentle girl, interrupting him, with tears in her eyes; "you must be better—you look better, for even now your cheek has a glow on it. I am sure we shall nurse you well again—let me bring you something refreshing." "Do not deceive yourself, my love," said the dying father, "this wasted form can never be restored by human aid. From heaven's mercy alone do I look for help in this my dying hour. You spoke of refreshment, my Emilie—take these my last notes—sit down to my piano here—sing with them the hymn of your sainted mother—let me once more hear those tones which have been so long my solace and delight." Emilie obeyed, and with a voice enriched with the tenderest emotion, sang the following stanzas:

"Spirit! thy labor is o'er,
Thy term of probation is run,
Thy steps are now bound for the untrodden shore,
And the race of immortals begun.

Spirit! look not on the strife
Or the pleasures of earth with regret—
Pause not at the threshold of limitless life,
To mourn for the day that is set.

Spirit! no fetters can bind,
No wicked have power to molest;
There the weary, like thee—the wretched shall find
A heaven, a mansion of rest.

Spirit! how bright is the road
For which thou art now on the wing,
Thy home it will be, with thy Saviour and God,
Their loud hallelujah to sing."

As she concluded, she dwelt for a moment upon the low melancholy notes of the piece, and then turning from the instrument, looked in silence for the approving smile of her father. It was the still and passionless smile which the rapt and joyous spirit left—with the seal of death—upon those features.

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

CITY OF TORONTO.—The semi-annual meeting of the Toronto Teachers' Association, was held February 29th, in the school-room of the Carlton-street Primitive Methodist Church. The President, Mr. Samuel McAllister, occupied the chair, Nearly all the teachers of the various city schools were present, and the presence of one or two members of the Public School Board was also noticeable. At the conclusion of the teachers' roll call, a communication was read from the Women's Christian Temperance Union requesting that temperance text books be brought before the pupils of the Public Schools: also offering the services of Mrs. Mary Hunter, of the National Women's Temperance Association of Massachusetts, to lecture on scientific temperance instruction for the benefit of the pupils. This matter was left to a committee composed of Messrs. Doan, Clarke, and W. J. Hendry to deal with, and report on. Owing to the illness of Mr. A. F. Macdonald, who was to have addressed the teachers on the subject of mental arithmetic, Mr. J. L. Hughes took his place, and in a very able manner suggested the best methods of instruction in this particular branch of study. A vocal quartette was next given by four members of the association, who rendered the piece entitled "How Fair the Maiden" with marked ability. After recess Miss A. Freeman spoke on the subject of "How to direct the private reading of scholars," and was followed by Mr. Hughes who, in a lengthy and most masterly manner, showed the advantages accruing from "object lessons," illustrating his ideas by means of leaves distributed among the teachers. Mr. J. A. Wismer then took up the subject of "The teaching of hygiene," a class of boys from the Victoria-street school being in attendance. Another quartette ("Evening Bells") then followed by members of the association. At its conclusion Mr. J. Boddy presented his report to the Inspector, which was the cause of a lengthy discussion. The idea in view is to secure uniform monthly reports from the different schools to the Inspector. Business was resumed Saturday morning at 9 o'clock, with the President, Mr. S. McAllister, in the chair. After roll call the election of officers took place, which resulted in the re-election of Mr. S. McAllister as President (Mr. J. L. Hughes having requested his name to be withdrawn); Vice-President, Mr. Doan; Secretary, Mr. R. McCausland. Executive Committee—Messrs. J. L. Hughes (*ex-officio*), W. J. Hendry, Cassidy, McEachren, Mrs. Arthurs, and Miss Williams. The Treasurer submitted his report for the past year which shows a credit balance of $171.55. The report was received and adopted. Mr. Doan, on behalf of the Committee appointed on Friday to deal with the communication received from the Women's Christian Temperance Union in reference to placing temperance text books more prominently before the scholars, reported that it was desirable, in view of the enormous amount of evil caused by intemperance, that special attention should be directed to the matter of temperance in connection with the study of hygiene in our public schools, and that an improved text book on temperance be asked for by the teachers, and also that should the Committee on Scientific Temperance Instruction, decide to send Mrs. Mary Hunter to lecture in this city, the members of this association will assist her to the utmost in their power. The report was unanimously adopted. The committee, to whom was referred the consideration of Mr. Bryant's recommendation in his paper, read last year before the Ontario Teachers' Association, that a Chief Superintendent of Education and a Council of Public Instruction instead of a Minister of Education should be appointed, reported;—That in the opinion of the committee it is inadvisable that any change be made in the way of directing the educational affairs of the Province by the appointment of a Chief Superintendent and a Council of Public Instruction in lieu of a Minister of Education. The committee recommend that the delegates of the Ontario Teachers' Association do support this resolution should the matter be introduced at the meeting of the Provincial Association. Mr. Boddy moved in amendment seconded by Mr. Crane, that in the opinion of this association, a Chief Superintendent and a Council of Public Instruction would best serve the interests of education in this Province. A protracted discussion ensued, in which Mr. Boddy strongly opposed the adoption of the report, calling attention to the fact that political influence might be used in granting certificates to teachers. Mr. Doan replied that while the committee highly appreciated the manner in which Mr. Bryant had treated the subject, yet he thought that the gentleman who was now at the head of the Education Department, and who had had experience in the work, having commenced at the foot and having worked himself up to the highest pinnacle of the educational ladder, should have a seat in the Legislative Assembly and having won the confidence of all interested in school work they should retain the present system and give it a fair trial. After some further discussion the amendment was lost and the report adopted by a large majority. The hearty thanks of the association was tendered to Mr. J. T. Slater for having engrossed a copy of a resolution passed by the association on the departure of the Rev. Dr. King from the city.

On motion of Mr. Hughes, seconded by Mr. Doan, it was decided to devote one day of the association's work during the last half of the present year to the meetings of the several grades independently, and that the Executive Committee be instructed to take steps to carry this resolution into effect in the several schools for the purpose of observing the practical work of the schoolroom. After some unimportant work had been disposed of, the singing of the National Anthem brought the meeting to a close.

The conversazione of the Association was held in the Normal School buildings on the succeeding Friday evening and proved an unequalled success in every respect. The museum and halls were thrown open for those who wished to promenade to some excellent orchestral music, while in the theatre the attractions were so interesting that there was hardly a vacant seat to be found after the entertainment commenced. Hon. G. W. Ross, Minister of Education, presided, and there was present on the platform Principal Caven, Mr. Hallam, and Mr. McAllister, President of the Association. Hon. Mr. Ross gave an address, which partook more of the character of a friendly talk with the teachers than of a prepared speech, and which was the principal feature of the evening. In the course of his remarks he said that a teacher must keep his mind in training by frequent reference to journals, etc. He should read books of travels, etc., in order that he might become posted in other countries, and be able to make the lessons more interesting. He would have to adapt himself to the idiosyncrasies and individualities of scholars, and for this he should try to broaden his literary horizon. The musical portion of the programme was ably supported by Misses Maggie Barr and Agnes Corlett and Messrs. Schuch and Hurst. Prof. Bohner presided at the piano.

ALGOMA.—The semi-annual meeting of the Algoma Teachers' Association was held in Manitowaning, on Thursday and Friday, 28th and 29th February, and although the weather was anything but propitious, quite a number found their way to the Convention, and a very pleasant and profitable time was spent. After calling the meeting to order, the President, Mr. G. F. Payne, delivered an excellent address, which contained some very original and striking remarks upon "School Books, what they are, and what they should be." After routine business was disposed of, the Librarian read his report, which shows clearly that the library is appreciated by teachers from all parts of the district. This was followed by a well prepared paper on "School discipline," by Miss Munroe, which treated the subject very exhaustively. Mr. Thos. Flesher then read a very interesting paper on "Why the Teacher's Business is Desirable," after which the "Permanency of the Teacher" was discussed. A well prepared and very interesting paper on "How to Teach Geography" was read by Mr. Thos. Sims, which was followed by a paper on "Proper Method of Questioning and Answering," by E. J. J. Ferguson. The officers for the next year are:—G. F. Payne, President, Thos. Sims, Vice-President, E. J. J. Ferguson, Secy.-Treas., T. Flesher, Librarian, Misses Pentland and Flesher, Auditors. Mr. Payne was appointed a Delegate to the Provincial Convention. Messrs. Brown and Cole were made Honorary members, and as both are men of practical ability the association will no doubt be benefited by their membership. This Association is steadily progressing, having risen from a state of almost insolvency to a flourishing institute with a good library and a surplus in the treasury. The next meeting will be held at Gore Bay, at such time as the Inspector may be able to attend.

E. J. J. FERGUSON, *Sec.-Treas., Manitowaning.*

EAST MIDDLESEX.—The meeting of the association was held in London, on March 1st, at 10 o'clock a.m., President Dearness in the chair. There were over eighty teachers present. The secretary read a communication from Miss A. Orchard, secretary of the Women's Christian Temperance Union of Ontario, memorializing the association to co-operate with them in urging the introduction of scientific temperance instruction into the public schools of the Province. After some remarks in praise of the movement, Mr. McQueen moved, seconded by Mr. N. Jarvis, that the secretary be instructed to reply, expressing the sympathy of this association in the said work and informing them that in this inspectorate temperance and hygiene have been placed on the curriculum of studies in the public schools and is taught in the majority of them. Mr. Jarvis gave an illustrative and amusing address on "Veneering in Teaching." He would divide the subject into two classes, legitimate and illegitimate. He illustrated the latter, and applied it to teaching. He thought it wrong to cripple the minds of youth by storing them with useless knowledge for the purpose of making a show. Mr. Smith took up the subject of "Literature." He would cultivate an insatiate desire to know. He would endeavor to have pupils learn the author from his work. Reproduction was of great value. The early introduction of literature would decrease the labor in other subjects, as it, correctly taught, would increase the vocabulary of the child. Discussed by Messrs. Liddicoatt, J. McLaughlin, and R. M. Graham. Moved by Mr. R. Walker, seconded by Mr. Smith, that our thanks be expressed to those who took part in the programme on Friday evening and to Mr. Colwell for use of organ. Carried. In the afternoon, Mr. Liddicoatt took up the subject of assigning a lesson in history. He would assign a lesson, always keeping in view the idea that by laying a platform the pupils had, as it were, guiding lines for their own reading. The details could then be gradually added. It was a well-worded and instructive address, exemplified by means of the blackboard. Mr. Dearness solved a number of typical questions in arithmetic. The Nominating Committee appointed by the President, reported the following officers had been chosen:—President, John Dearness; 1st Vice., W. H. Liddicoatt; 2nd Vice., Miss Fannie Geeson; Secretary, A. McQueen; Treasurer, W. D. Eckert; Librarian, Wm. Bell. Moved by Mr. Graham, seconded by Mr. W. F. May, that the report be adopted. Carried. Moved by Mr. Liddicoatt, seconded by Mr. Kerr, that in future the meetings of the association be held on Thursday and Friday instead of Friday and Saturday. Carried. Moved by Mr. McQueen, seconded by Mr. Jarvis, that the Management Committee have power to communicate with West Middlesex Teachers' Association for the purpose of amalgamating with them in conducting promotion examinations. Carried. Moved by Mr. Harlton, seconded by Mr. Walker, that the Management Committee have power to settle accounts contracted at this meeting. Carried. The first question from the question-drawer was taken up by Mr. Harlton: "A large boy prompted a small one to commit an offence. I punished both alike. The parents of the large boy are very angry that their son was punished. How should I have acted in the cases?" Mr. Harlton thought it was justifiable to punish both. Votes of thanks were passed to the press and County Council. The association then adjourned.

STORMONT.—The usual half-yearly meeting of the Stormont Teachers' Association was held in the high school building, Cornwall, on the 7th and 8th February. The president, Mr. McNaughton, I. P. S., in his opening address, gave the teachers some useful information regarding the recent uniform promotion examination. The following important motion was passed at the commencement of the meeting: Moved by James Smith, B.A., seconded by Mr. R. B. Carman, that "No amendment or alteration of the constitution of this Teachers' Association shall be made, unless notice of said amendment shall have been given at one regular meeting of the association, and voted upon and passed by a two-thirds majority of the members present, at the next following regular meeting." The election of officers for the current year resulted as follows: Mr. Smith, President; Miss Carpenter, Vice-President; Geo. Bigelow, Sec.-Treas.; Messrs. McNaughton, Relyea, Talbot, Miss Loucks, and Mrs. McLeod, Committee of Management. Messrs. Carman and Talbot were appointed auditors, and their report showed a balance in favor of the Association of $76.68: adopted. Mr. Talbot was appointed delegate to the Provincial Association, necessary expenses to be paid out of the funds of the society. The question of text-books was laid over until the next meeting, to be held in Cornwall, on the 2nd and 3rd October of the present year. Mr. Harrington introduced the subject, "Minister of Education *versus* Chief Superintendent"—an interesting paper, and a lively discussion of the matter resulted in the passing of the following resolution:—Moved by M. F. Harrington, seconded by Judge Carman, that "It is the opinion of this Association that the Minister of Education should be retained, but that a change should be made in the Central Committee so as to give greater representation to the public school teachers and inspectors." Mr. Bissett gave a paper replete with useful instruction as to the teaching of geography, especially to junior classes, calling attention to the several important topics in connection with it,—object lessons; the development and expression of ideas; local geography; natural scenery; the cardinal points; constant reviews; the use of maps; the order of topics; etc. Mr. Smith dealt with "Entrance examinations" in such a manner as to make those interested feel grateful that their teaching processes were conducted under auspices so favorable. The advantages of the present system were made apparent by contrast with the past. The following points of excellence were emphasized: Educationally they have improved our public schools and laid a better foundation for higher education. Financially, they prevent the crowding of unprepared pupils into schools for the sake of the increased grant; and socially, they prevent the high schools from being utilized as fashionable resorts for the upper and wealthier classes. Mr. Carman strongly advised the teachers to send their pupils to Cornwall High School Entrance Examinations. A very important action was taken with regard to the Temperance Question, and perhaps the best part of the work of the present session was done when this subject was under consideration. Surely there is hope for the country when the educators of youth give no uncertain sound upon this most important topic of the day. The eloquence of Judge Carman was never used to better purpose than in advocating the introduction of a Temperance Text-book into the public schools. We are encouraged to look forward to a time when humanity's progress towards its ideal will be unimpeded by the terrible evils condensed in the word intemperance. A petition issued by the Women's Temperance Union was introduced by Mrs. (Judge) Pringle, asking the Minister of Education to authorize for teaching purposes a book setting forth the effects of alcohol upon the human system. The petition was signed by all the members present. The teaching of history in the

public schools was explained by Mr. Somerville and very important ideas as to the best methods were advanced. A point strongly emphasized by the speaker was, "the teacher is the living text-book." Practical discussion followed the reading of this interesting paper. Mr. Talbot next favored the meeting with his method of teaching Fourth Book Literature. This subject, like the others, underwent a thorough analysis. Criticisms and opinions were freely expressed and doubtless some were benefited thereby. Mr. McNaughton strongly recommended the teaching of drawing. "Very profitable indeed" was the verdict of all who were privileged to be present at the fourteenth meeting of the Association. GEORGE BIGELOW, *Secretary.*

REVIEWS.

THE MAKING OF ENGLAND: By John Richard Green, M.A. With Maps, 8vo., pp., xx, 434, $2.50. *Harper and Brothers, N. Y.*

THE CONQUEST OF ENGLAND: By John Richard Green M.A., LL.D. With full Portrait and Maps. 8vo., pp. xxvii, 607, $2.50. *Harper and Brothers, N. Y.*

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The Conquest of England contains passages as brilliant as anything Mr. Green ever wrote. The story of the conquest is told with his usual graphic force; and the work must prove of great value to all students of this part of English History and will be especially suited to those—and they are the many—who can never find time to grapple with the voluminous work of Freeman.

Green's Historical works should be in every school library in the Dominion, and Harpers' is probably the handsomest edition yet published.

A SYSTEM OF RHETORIC: By C. W. BARDEEN. 12mo, pp. cxi, 674, $1.50. *New York, A. S. Barnes & Co. (Just published.)*

This work is a new departure on the subject of which it treats—and a departure, we venture to say, in the direction of the useful and practical. It is divided into six parts, treating respectively of Sentence-making, Conversation, Letter-writing, The Essay, The Oration, and The Poem. Each of these subjects is treated with considerable fulness, and always in an eminently interesting and suggestive manner. In designating the work as "practical," we do not mean that it ignores principles, but that its explicit statements of principles are accompanied and enforced by striking and interesting examples. There is great force, as every teacher knows, in an apposite example, and it is not too much to say that wit and wisdom have been culled from a wide field of English literature to illustrate the rules and principles given in several parts of the work. The book is written from the "stand-point of one whose daily work it has been for some years to read and select and publish manuscripts, who knows from experience the actual difficulties and faults of young writers and who would like to help them." So says the author; and from a careful examination of his book, we believe that his is an *intelligent* experience, and have not the slightest doubt that he has succeeded in his laudable undertaking "to help" the young student to a mastery of his mother tongue. We heartily recommend this work to every teacher and student of English.

A BRIEF HISTORY OF ANCIENT, MEDIEVAL, AND MODERN PEOPLES, with some account of their Monuments, Institutions, Arts, Manners, and Customs, 12mo, pp. xxvi, 600. *A. S. Barnes & Co., New York.*

This is one of Barnes's "Brief History Series," which has met with general approval among teathers in the United States, and to which we called attention in our columns some time ago. "In this work the political history, which occupies most, if not all, of the ordinary school-text, is condensed to the salient and essential facts, in order to give room for some account of the literature, religion, architecture, character and habits of the different nations. Surely it is as important to know *something* about Plato as *all* about Caesar, to learn how the ancients wrote their books as how they fought their battles; and to study the virtues of the old Germans and the origin of our customs in English home-life, as to trace the squabbles of Alexander's successors or the intricacies of the wars of the Roses. From this may be inferred the general plan of a work which must prove very useful to teachers and students. No intelligent teacher can afford to be ignorant of the matter which this book contains, yet few teachers and still fewer pupils can afford the time to wade through the ponderous terms whence such matter has to be gathered. The value of the work is much increased by the numerous dates in parentheses, the black-board analysis, the pronunciation of the names in the Index, the Genealogical Tables, the Novel Historical Recreations in the Appendix, and especially the choice *Reading References* at the close of each general subject. The teacher as well as the general reader will find this Brief History a *multum in parvo*. We recommend our readers to send for catalogues of A. S. Barnes & Company's excellent school publications.

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WENTWORTH AND HILL'S EXAMINATION MANUALS. No. 1, ARITHMETIC; No. 2, ALGEBRA. *Boston: Ginn, Heath & Co., 1884.*

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VOL. IX. TORONTO, MAY, 1884. No. 5.

Table of Contents.

EDITORIAL :— PAGE.
Our Normal Schools 97
The Schools of Nova Scotia 98
Canadian History 98
The Eleventh Plague 99
Notes 100
Reports of Cases 100
OFFICIAL DEPARTMENT :—
Educational Legislation 101
Changes Relating to the Examinations for Teachers' Certificates 101
Examination Time-Table 102
MATHEMATICAL DEPARTMENT :—
Selected Problems 102
Ontario Education Department 103
Elementary Algebra 104
CORRESPONDENCE 105
SPECIAL ARTICLES :—
The Study of Science 107
Battalion Drill 108
Juvenile Crime 109
Old English Spelling 109
PROMOTION EXAMINATIONS :—
County of Wellington Promotion Examinations .. 111
PRACTICAL DEPARTMENT :—
Two Teachers 114
School Hygiene 114
Counsel to Young Teachers 115
The Principal 115
NOTES AND NEWS :—
Ontario 116
Nova Scotia 118
General 118
Ontario Teachers' Association 118
READINGS AND RECITATIONS 119
TEACHERS' ASSOCIATIONS 120
REVIEWS 120

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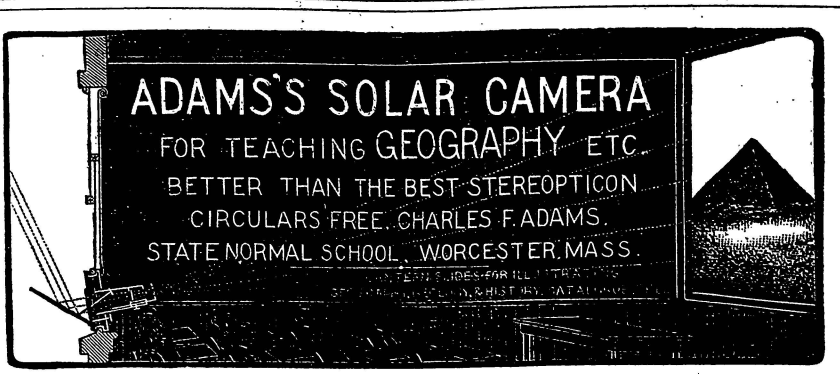
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The Canada School Journal.

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CANADA SCHOOL JOURNAL HAS RECEIVED

An Honorable Mention at Paris Exhibition, 1878.
Recommended by the Minister of Education for Ontario.
Recommended by the Council of Public Instruction, Quebec.
Recommended by Chief Superintendent of Education, New Brunswick.
Recommended by Chief Superintendent of Education, Nova Scotia.
Recommended by Chief Superintendent of Education, British Columbia.
Recommended by Chief Superintendent of Education, Manitoba.

The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

OUR NORMAL SCHOOLS.

The Minister's Report supplies the usual statistics of these institutions, and the special Report of the Director gives some additional information about their internal economy. It is unnecessary to remark that educational work cannot be estimated by the cord and that quality far more than quantity is the main thing worthy of attention. The large number of teachers attending these schools is, however, some slight guarantee that in several departments valuable work is accomplished, and that the country is on a whole getting a fair return for its outlay. Though their progress has been slow, and not at all commensurate with the general advancement throughout the high schools of the province during the last decade, they have lately taken some onward steps. It is noticeable that for the last two years we have heard fewer complaints from ex-students that their time is frittered away in laboriously doing nothing, and the Ottawa school is at last reported fairly efficient. The indications are that this is only the beginning of a thorough reformation, and that shortly they will command the respect accorded to the Toronto school in its early years under the energy and contagious enthusiasm of men like Robertson, Ormiston, and Sangster.

Sweeping criticism is out of place where such large staffs of instructors are involved. It is somewhat difficult to speak plainly and point out conspicuous failures, even where such failures have been publicly notorious for many years, and the Director has chosen the more agreeable alternative of calling attention to the excellent work done by master workmen. Students soon catch the fire and zeal of real masters, and though their praises should never be written in any public Report, they are embalmed in the hearts and memories of each succeeding class of students, whose generous appreciation of real help is always equal to their scorn and contempt for a mere succedaneum.

Perhaps it is even worth the money wasted on *one* unmitigated sham, to have at the very heart of our system a sort of educational beacon for the instruction and warning of novices about to enter a noble profession. The Greeks were not generally supposed to have been lacking in acuteness, yet they sometimes introduced an intoxicated slave into the presence of their children to produce in them a disgust for inebriety. On the same principle of contrast, the lack of training, scholarship, and teaching power, the evils of ill-tempered scolding, perpetual nagging, coarse manners, and unsympathy, may be deeply impressed by a peculiar kind of object lesson. Experimental methods of teaching are greatly valued in these days, and if students are made to experience in their own persons some of the worst educational calamities, we may naturally suppose they will go to their fields of labor with an abiding distaste for the evils to which they have for a little while been subjected, and will be extremely cautious how they inflict similar wrongs on those committed to their own care. A single blot sometimes shows off the effect of a fine picture, and a lengthened probation to stupidity may be at bottom founded on a sound and subtle philosophy of education. Foreign educationists do not seem to have discovered this shadow which heightens the general effect of our system. Perhaps it would be difficult to persuade the French and the Germans, after what they have heard of us, that we keep an expensive model of imperfection for the sake of getting our young teachers to press on to perfection.

Turning to brighter things, we find the most marked improvements in Music, Drawing and Methods. The cheery influence of song is surely making its way into our schools, and a great majority of our Normal students go away anxious to introduce it into their schools. Some who could not draw a straight line return to their school-rooms, set their pupils to work at designing new patterns and thus give happy and varied employment, furnishing recreation and imparting practical skill along with taste and refinement. Practical Chemistry is well taught in many a public school, and the young pupil led successfully into the path of experimental science while he is at the same time interested and amused. Our Normal Schools are growing better and not worse, and on the whole deserve generous support and kindly criticism. Every lover of education heartily wishes them good speed in their noble work. They ought to be multiplied in number, increased in power, thoroughly equipped and fully prepared for the great mission that lies before them during the closing years of the century. Superannuated incompetence could better be accommodated with housing at some other public institution.

THE SCHOOLS OF NOVA SCOTIA.

The Annual Report of Dr. Allison, the Superintendent of Education, states that the record of the past year is more than usually satisfactory. There has been an increase in the number of schools, teachers, and pupils, and the sum expended on school buildings much exceeds the average amount during recent years. Teachers' salaries have gone slightly upward, and new interest has been manifested both in methods and subjects of instruction. During the winter 1,911 teachers were employed and 2,011 during the summer term, to instruct 98,307 pupils enrolled at 1,943 schools. In 1878 the number of pupils was 102,538, showing a falling off similar to that observed in the province of Ontario during the last few years. In 1880 the attendance sank to 93,700, so that, as in Ontario, it is again on the increase.

The total expenditure for public schools for 1883 was $612,889, of which $176,072 was government aid and $436,817 derived from local sources.

The average salary for first class male teachers was $408.70 and for female teachers $298.24. For second class teachers the averages were, males, $279.06, females $230.52. The averages for third class teachers were $206.09 and $159.10 respectively. The highest averages were $669 for first class males, $450 for second, and $414 for third class. The corresponding figures for women were $430, $330, $270. These figures bear out our contention that part of the fixed grant to schools should depend on the grade of the teacher's certificate, and make it plain that the plan would be fair to the local authorities, while it would stimulate teachers to advance as rapidly as possible in their profession. In fact the distribution in Nova Scotia *does* depend on (*a*) the number of teachers employed, (*b*) the grades of license, and (*c*) the relative time the schools are open. During the summer term 630 teachers removed to other schools, and 664 in the winter term, while 1,136 and 953 respectively continued in the same sections. During the same periods 215 and 263 teachers respectively were engaged for the first time.

There is one Normal School, on which the expenditure was $5,133, and $753 was paid for the travelling expenses of Normal School students. It has five teachers, whose salaries amounted to $4,250; it instructed 125 students, of whom 77 received licenses to teach. The Model Schools attached have 12 teachers, whose salaries amounted to $4,850, and the total expenditure on these schools with 1,009 pupils enrolled was $6,808, of which the province paid $800. General and professional education are carried on simultaneously at the Normal School, but the Superintendent urges the necessity of making it distinctly a training school for teachers. There is nothing corresponding to the County Model Schools of Ontario, but Dr. Allison recommends such a reconstruction of the academic system as would prepare the advanced schools to undertake the entire non-professional training of teachers, just as the High Schools of Ontario now do with marked efficiency. He also recommends the separation of the non-professional from the professional examinations of teachers as the first step to be taken. The admirable results obtained here by training third class teachers in local model schools are worthy of careful examination, if a general reconstruction of the system of professional training is aimed at by the authorities of Nova Scotia. The outlines of the proposed plan for reconstructing the secondary schools were given in these columns last month. After giving statistics to show that only a small percentage of all the pupils study such branches as science, algebra, geometry, Latin and Greek, the Superintendent remarks :—

"A glance at the foregoing figures will tend to allay the apprehensions, cherished by some, that our schools are being given over to the domination of certain high sounding ''ologies.' To be candid, I have never shared in such fears, believing them, when entertained, to be based on misconceptions. In the first place, to sneer at a useful branch of knowledge, whose principles may be closely related to the health, the life, or the general usefulness of human beings, as an ''ology' does not affect either its intrinsic or its educational value. We have made a beginning of introducing the elements of science into our schools, to say nothing of the *pre-scientific* work done in a goodly number in the shape of simple lessons in color, form, and the more obvious phenomena of nature; but in my judgment we must do more in both directions before we meet the real necessities of the case. Secondly, our 'Course of Study for Common Schools' is intended to lay emphasis on the importance of the fundamental branches. No ideal perfection is claimed for its provisions; it is probable that extended experience will suggest as desirable their modification at certain points; but beyond all question the course has the merit of recognizing *all* of the studies accepted as constituting the general basis of human culture and the instruments by which the ultimate results of education are to be secured. These it adjusts in their proper relations, and, at least approximately, assigns to each its just degree of importance. Surely those who criticize it as a means designed to promote a showy veneer of knowledge at the expense of all that is solid and substantial in education, have never studied either its aim or its requirements."

CANADIAN HISTORY.

The following extract from the report of an address by the Hon. G. W. Ross at the opening of the free library in this city articulates itself precisely into the remarks of the JOURNAL on the teaching of history. The hon. gentleman said :—

"Above all things was it necessary that Canadians should study thoroughly the history of their own country. If there was one thing more than another that was studiously avoided in the educational system of this country it was the study of its history. Even in the Public Schools—those schools of which they were so proud and boasted so much in the Province of Ontario—this branch was grievously neglected. The children were taught the history of France, of Germany, of Italy, and of other European countries; they were taught the history of ancient Greece and Rome; but the history of their own country—this fair Canada of ours—which it behooved them all to know and understand, was almost totally neglected. It was not so in the United States. Every schoolboy and girl was taught something of the life and doings of George Washington and of those other men who had helped to build up the great country to the south of us. But how many children in Canadian schools had any acquaintance with the lives of the distinguished men whom Canada had produced? He feared the number was amazingly small."

This is, we hope, the shadow of a coming event. Let "Canada for Canadians" be the motto of the school-room as well as the political platform.

Everything cannot be accomplished in a few months, but we take it for granted that this Canadian Minister of Education means to make Canadian children somewhat acquainted with the story of their own fair land. Our boys and girls shall know who Champlain and Frontenac were, how England came into possession of these floods and forests, what dangers and difficulties befel the pioneers in these provinces, how responsible government came in and with what struggles, how the constitution and laws arose under which we live, what is the measure and what the guarantee of the freedom and privileges we are handing over to these children. Our Canadian boys and girls shall know something of the heroic struggles and the sturdy independence of those whose monuments are the free, fair homes of Canada hewn from the unbroken forest. They shall feel their young hearts glow with patriotic enthusiasm over the story of adventure and daring equal to any in European annals. They shall grow up to honor the memory of the soldiers, the statesmen, the scholars, the philanthropists, the hardy pioneers, all who have labored in the spirit of self-sacrifice to place the boys and girls of 1884 in the midst of the advantages they now enjoy. They shall mark the errors of the past, and learn to use their liberty and intelligence in developing the material and moral resources of our young nation and in shaping for it a destiny worthy of its noble parentage.

This is indeed one of the best things our system can do for the rising generation. How is the result to be accomplished? By training its teachers, for THE TEACHER IS THE SCHOOL. It cannot be done by merely drawing up paper programmes, and prescribing dictionaries of Canadian antiquities. That plan has been tried before, and has failed on every trial. It cannot be done by setting examination papers for public and high schools, for colleges and universities, with one or perhaps two questions only on Canadian affairs. It cannot be done by continually giving Canadian history the go-by, and acting on the assumption that we have no history worth studying, and that the doings of stark William, red-haired William, long-legged Edward, or six-wived Henry are of more practical importance to the average Canadian citizen than Pontiac's conspiracy, the American invasion, Durham's report, or the Act of British North America.

We have been bestridden by European ideals in this matter, and have been led to look upon ourselves as mere colonists to such an extent that scarcely a hundred of our seven thousand teachers have any adequate knowledge of our three centuries of remarkable progress. The demand has been so small that we have scarcely a decent text-book. Place Canadian history on a level with chemistry and geography and good text-books will soon appear. Make it a necessary subject in every examination for a teacher's certificate, and insist on something more than can be learned in a few hours from a child's primer, and we shall soon have teachers with a constructive comprehension of the subject, with power to hold the attention of their pupils, placing before them the stirring scenes of our history and filling them with the idea that they have a country worth living for, a liberty worth defending, and a future not to be over-shadowed by that of any other civilized community. Good speed to the introduction of Canadian history into the schools of Canada.

THE ELEVENTH PLAGUE.

The malignity of Satan has never devised anything worse for youth than the Dime Novel, the Nickel Library, and the rest of the foul brood that is constantly issuing from the New York printing-houses. The arch-fiend made a master stroke in getting the press enlisted into his service. This juvenile criminal literature is a far more awful scourge to our race than leprosy, cholera, and yellow fever combined. They slay their thousands, but corrupt literature specially prepared for young boys ruins its tens of thousands. The angel of death can sheath his sword, and pestilence at last ceases from the work of destruction. But the wretches who ply the infamous business of corrupting and degrading our boys take no holidays. They dig graves that reach down to perdition, and never cease from the diabolical trade of snaring the flower of our youth into the jaws of something worse than death, and ruinous as hell. Their terrible poison pours more than seven vials of woe into the bosom of the family, and blights the hopes of parents by destroying the son of their tenderest affection. If fiends ever rejoice, it must be when they see literature, one of the grandest instruments for the moral elevation of mankind, the handmaid of purity and virtue, vilely prostituted to the service of darkness and vice.

If these remarks seem too strongly expressed, we could easily produce a dozen paragraphs from the daily papers gleaned in the course of merely a couple of weeks to show that this statement of the evil arising from impure books for boys is all too feeble, and does not convey half the truth concerning its heinousness and turpitude.

We have laws to protect even our cattle against contagion. We have quarantines and health officers to prevent the spread of smallpox, cholera, ship fever, and other virulent diseases. We have gone so far as to prohibit filthy, obscene, licentious literature. We have penal laws against the revolver and the dirk. But this "Jesse James" and "Buffalo Bill" literature is allowed to cross our lines without objection, though it is destroying our first-born and steeping many a home in woe. It is time that the teachers and parents throughout the whole Dominion joined in a thousand-voiced protest of indignation against this outrage on our schools and our homes. Let every teachers' convention and every board of trustees pass resolutions of abhorrence and forward them to the local governments. Let every Sunday School convention and every conference, synod, and assembly do the same. Let every newspaper and educational journal attack the vile trash and demand its exclusion from our shores. Let every pulpit denounce this traffic in the souls of our boys. It is the common enemy of the human race, let us join battle against our hated foe without distinction of creed. Canada long ago, first on this continent, first of the British colonies, declared death to

slavery. But this is an evil of vaster magnitude than the slave trade. Like slavery, it is a totally foreign element. None of these satanic books are printed here; and we want a national policy to protect our morals as well as our manufacturers. One solid, united effort, and the perilous stuff will be sent back to the slums whence it issues. If any bookseller dares to defy decency and indignant public opinion by dealing in this poison, let him be exterminated; he is a traitor to civilization.

We contend for a *pleuum*, not a *vacuum*. Every child should be taught to read, every reader should have abundance of good reading. The enemy of darkness is heaven-born light. Teachers, what are you doing to sow the good seed which shall spring up and smother out these foul and poisonous weeds? Do you get the *Pupils' Companion* for your pupils from C. W. Hagar, 697 Broadway, New York? Have you ever told your boys of that miracle of cheapness and pure literature, *The Elzevir Library*, issued by John B. Alden, 18 Vesey Street, New York? Do they know that for a two cent stamp each they may have delivered at their own post-office Creasy's *Battle of Waterloo*, his *Battle of Saratoga*, his *Battle of Hastings*, Swift's *Battle of the Books*, Irving's *Rip Van Winkle*, *Æsop's Fables*, *Sinbad the Sailor*, and many other entertaining books all at two cents each? Do your pupils know anything about the *Boys' Own Magazine*, *St. Nicholas*, *The British Workman*, *Our Little Ones*, and other friends of purity and fun? Have you ever tried to get up a club for some of these papers at your school, so that the taste for good reading may come by tasting good reading? Do you ever read to your boys books they like to hear read? Have you read the *Hoosier School Boy* or *Tom Brown's Schooldays* to them? Let the sweet sorcery of pure story, adventure, and fairy tale cast its spell over the susceptible imagination. All work and no play is a bad formula for school as well as home. A couple of hours on Friday afternoon devoted to *The Arabian Nights*, *Robinson Crusoe*, *Pilgrim's Progress*, etc., and to readings and recitations by the pupils themselves, may under the power of sympathy be made a means of grace. If you would get a troublesome pupil on your side do three things: get him to help you to do something, set him to work that he likes to do, and *read a good story to him.* Impudence, laziness, sulkiness, even stupidity itself will vanish under the sunshine of sympathy, congenial employment, and good reading. The CANADA SCHOOL JOURNAL will assist you.

An American School of Classical Studies has been established at Athens, Greece. It was founded by the Archæological Institute of America, and is supported by the contributions of fourteen of the principal colleges in the United States. The Faculties of these colleges select the Director of the School, who holds office for a year. The gentleman who filled the position during 1882-3 was the celebrated Harvard Professor, Dr. W. W. Goodwin. His successor for 1883-4 is Prof. Van Benschoten, of the Wesleyan University, Middletown, Conn. The report of the first director, Dr. Goodwin, has been deemed so important in its general bearings and superior classical instruction that it has been included among the publications of the National Bureau of Education at Washington. Dr. Goodwin in his report expresses the opinion that facts prove a real demand for such a school as that which has been established. The idea lying at the root of it is neither new nor specially American. The French Government has supported such a school in Athens for the past thirty-seven years, and the German Government one for the past nine years; in these schools learned scholars of both nations are permanently maintained, valuable libraries are kept up, and students are supported, all at the expense of the Governments at home. The French school occupies an elegant palace on Mt. Lycatettes, commanding a view of the whole Attic plain. The German school, while occupying a more modest abode, commands the services of one of the most accomplished scholars of Germany, Professor Kohler. England also is seriously considering plans for the establishment of a similar school. The precise objects of the American school are thus stated :—

"The object of the American School of Classical Studies is to furnish graduates of American Colleges an opportunity to study classical literature, art, and antiquity in Athens under suitable guidance, to prosecute and to aid original research in these subjects, and to co-operate with the Archæological Institute of America, as far as it may be able, in conducting the exploration and excavation of classic sites.....The director superintends personally the work of each member of the school, advising him in what direction to turn his studies and assisting him in their prosecution. He conducts no regular course of instruction, but holds meetings of the members of the school at stated times for consultation and discussion."

REPORTS OF CASES.

Twenty-seven boys and girls sat in a school-room—two at a desk. An old rusty stove stood before the teacher's desk; behind that desk sat a woman about twenty-four years of age. Her lips were compressed, chalk dust lay on her brown hair and on her black dress. She was evidently—mad. It was time for dismissal, the clock hand pointed to ten minutes past four o'clock, and still she sat there. The scholars were very uneasy, for the air was close and they were tired. Finally the teacher rose.

"You are all anxious to go home, but why are you not anxious to be good scholars? I declare I am positively ashamed of you. You have been so noisy that you don't deserve to go home; but I shall dismiss you."

They filed out, one at a time, not one looking back to say good night, or ask her if her head ached, or if she would not go home with him and take tea. For a few moments gay laughing and cheerful voices were heard outside; then all was still.

The teacher went to the window and leaned on her hand; she watched their retreating forms; soon all were gone. Then she burst into tears.

All this grew out of a want of co-operation between these two parties. The teacher complained only of little things; the pupils complained only of little things. But life is made up of little things. Teachers, you must plant if you would reap.

Official Department.

EDUCATIONAL LEGISLATION.

1. High School Masters will henceforth elect *two* representatives to the Senate of the Toronto University, instead of one as formerly. These representatives, however, will now be elected by the head masters *and their legally qualified assistants*, so that the whole teaching staff will be represented as well as the head masters. This doubles the representation and quadruples the constituency. Next year the representation must be doubled again, and our legislators must not be allowed to forget it.

2. Power is given to the Senate of Toronto University to grant the LL.D. degree without examination. The subject of Honorary Degrees will hardly bear even the most delicate handling. Least said is soonest mended. The influx of Honorary Degrees from obscure colleges in Michigan, Georgia, etc., perhaps made this step necessary. We sincerely hope that the Senate will prove ultra conservative on this point and religiously abstain from using the power conferred upon them.

3. Power is given the Convocation of Graduates to provide for the representation of members who are unable to be present at its meetings; and the meetings of Convocation are facilitated by some minor amendments. The power of the graduates in Convocation is, however, left as before, the shadow of a shadow.

4. Non-residents may require the school-tax on unoccupied land to be appropriated to a separate school situated within three miles, in a direct line, from said separate school.

5. Any board of separate school trustees, and the council of any municipality (three-fifths of whose members are not separate school supporters), may enter into an agreement for a term of years, that for each year of the said term, and at such times and in such sums as may be agreed upon, there shall, in lieu of and as being the amount to be levied and collected in such year for separate school purposes, be paid by said municipality to said board a fixed proportion of the total amount levied and collected within the municipality in and for such year for both public and separate school purposes; provided always, that if in and for any such year the rate in the dollar of assessment actually levied for separate school purposes within said municipality is not the same as that actually levied therein for public school purposes, then said agreement shall not be in force for or apply to such last mentioned year; provided also that any agreement made as aforesaid may be determined at the end of any calendar year on giving six months' notice by either of the parties thereto to the other party.

6. Mr. Gibson (Hamilton) moved—"That inasmuch as the Senate of Toronto University has for several years admitted women to the university examinations and class lists, and inasmuch as a considerable number of women have availed themselves of the privilege, but labor under the disadvantage of not having access to any institution which affords tuition necessary for the higher years in the course: in the opinion of this House provision should be made for the admission of women to University College." Motion carried after an animated discussion.

CHANGES RELATING TO THE EXAMINATIONS FOR TEACHERS' CERTIFICATES.

By regulations recently adopted, some changes are effected respecting the examinations for teachers' certificates in July next.

READING TEST INTRODUCED.

1. Reading has heretofore been neglected to a certain extent in our High Schools, and as a consequence no examination was required in this subject from candidates applying for second or third-class certificates. The new regulations provide that every candidate must read a passage to be selected by the County Board of Examiners, and in the presence of an examiner appointed by the County Board for this purpose, the result of the test to be sent to the Education Department. It is thought by this means that greater attention will be paid to this very important subject of the school curriculum.

REGULATION REGARDING PENMANSHIP.

2. Another subject very much neglected is writing, and in this no standard was required. Under the new regulations excellence in penmanship will be absolutely necessary. Although writing is not generally regarded as a test of scholarship, still it is very desirable that greater attention should be paid to it in our Public Schools, and excellence in a teacher is one way of securing excellence in the pupil.

MUSIC AND DRAWING.

3. To encourage the study of music and drawing an examination may be passed in either or both of these subjects, and the number of marks obtained by the candidate will be added as a bonus to the total obtained in the obligatory subjects, and thus assist in making up the aggregate necessary for a certificate. It is hoped by this means to encourage the study of music and drawing in all the Public Schools of Ontario.

ORDER OF EXAMINATIONS.

4. The examinations for second-class will immediately follow the intermediate and third-class examinations, so that both can be taken by the same candidate, but third-class certificates will not be awarded on second-class papers.

AN ENTRANCE FEE.

5. Every candidate will be required to pay a fee of one dollar towards defraying the expenses of his examination. Heretofore these examinations have cost the Province between $5,000 and $6,000. It is considered just that candidates themselves should bear this burden, and in doing so they are only submitting to the obligation imposed upon candidates at the law examinations at Osgoode Hall and elsewhere.

RENEWAL OF CERTIFICATES.

6. It has been the practice of the Department in order to retain successful teachers in the profession to renew third-class certificates on the recommendation of the Inspector and the Board of School Trustees without re-examination. This custom has been found to operate injuriously. Many teachers were content to continue teaching on a third-class certificate, trusting to the indulgence of the Inspector and the exigencies of Boards of Trustees for a renewal. Under the new regulations no renewal can be obtained without re-examination except under very special circumstances, but in order to prevent the worthy teacher from leaving the profession the Inspector is to be allowed to add any number of marks up to 200 to the number made by such a candidate at the non-professional examination.

In this way the teacher is obliged to keep up with the educational advancement of the country by constantly revising his studies, and if successful his services receive an appropriate reward. It is also hoped that a re-examination will have the tendency of inducing many who would be disposed to repose upon their laurels to press into the higher ranks of their profession.

The following is the full list of the regulations regarding the forthcoming examinations:—

SUBJECTS FOR THE NON-PROFESSIONAL EXAMINATIONS.

NOTE.—It will be observed that the only material change introduced into the curriculum for the present year, is that the subjects of reading and writing are required. Candidates for the intermediate only will take the subjects 1 to 7, and either subjects 8, 9, or 11, as formerly.

THIRD-CLASS NON-PROFESSIONAL EXAMINATION.*

The obligatory subjects of this examination for 1884 are as follows:—

		Value.	Minimum required.
1.	Reading	100	25
2.	Writing	75	19
3.	English Grammar	150	15
4.	English Literature	150	37
5.	Composition	100	25
6.	Dictation	50	12
7.	Arithmetic and Mensuration	150	45
8.	Algebra	100	25
	Euclid	100	25
9.	History	75	19
	Geography	75	19
10.	Mental arithmetic	75	19
11.	And any two of the following three:—(a) Natural philosophy, chemistry, botany	200	50
	(b) Latin.		
	(c) French.		
	(d) German.		

To encourage the study of Music and drawing an examination may be passed on either or both of the subjects, and the number of marks obtained by the candidate will be added as a bonus to his total. The value of each of these is fixed at 75 marks.

The total value of the obligatory subjects is 1,400, and in addition to the prescribed minimum on each, the candidate is to make 700 marks on the aggregate.

The presiding examiner in the subject of Reading shall be selected by the County Board of Examiners, the result to be reported to the Department. He shall hear each of the candidates read a passage selected by examiners from an authorized Fifth Reader. The paper in Writing will also be considered by the Central Committee.

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* Those who have already passed the Intermediate Examination are not required to pass again in the same subjects for Third-Class. A female candidate may, at either the Second or Third-Class Examination, substitute for Algebra one of the subjects of French, German, Music, or Botany, in which she has not been examined for the Intermediate. The bonus for Music will not be allowed where Music is taken as a substitute for Algebra.

EXAMINATION TIME-TABLE.

FIRST-CLASS, 1884.	
DAYS AND HOURS.	SUBJECTS.
Non-Professional Examination.	
GRADE C.	
Tuesday, July 15.	
P.M. 2—3.....	Composition.
3.5—5.5..	Geography.
Wed'sday, July 16.	
A.M 9—12....	Nat. Philosophy
P.M. 2--5.....	History.
Thursday, July 17.	
A.M 9—12 ...	Arithmetic.
P.M. 3—4 30..	Eng. Lit & Lang
Friday, July 18.	
A M. 9—12....	Euclid.
P.M. 2—5.....	Grammar.
Saturday, July 19.	
A.M. 9—12....	Algebra.
P.M. 2—4.30..	Hydros. & Heat.
Monday, July 21.	
A M. 9—11....	Chemistry.
Professional Examination.	
Monday, July 21.	
A.M. 11.5—12.35	Edu.—1st Paper
P.M. 2—4.....	" 2nd Paper
Tuesday, July 22.	Music. Drawing. Drill. Reading.
GRADES A & B.	
Wednesday, July 7 & 3 following days.	

NON-PROFESSIONAL, THIRD, AND SECOND-CLASS, 1884.		
DAYS AND HOURS.	SUBJECTS.	CLASS.
Monday, July 7.		
A.M. 9—9 20 ..	Reading Regulations	3
9 25—11.25	English Literature..	3
P.M. 1—2.30	Algebra.	3
2.35—4.05..	Geography	3
4.10—5.40..	Chemistry.....	3
Tuesday, July 8.		
A.M. 9 00—11 00	Eng ish Grammar...	3
11.05—12.35	History	3
P.M. 1 30— 3 30	Euclid	3
3 35— 5 05	Natural Philosophy.	3
Wednesday, July 9		
A.M. 9.00—11 00	Arithmetic	3
11 05—11 25	Reading Regulations	2
11.30—12.00	Mental Arithmetic	3 an
P.M. 1.0 — 2 00	Composition... ...	3 " 2
2.05— 2.35	Dictation	3 " 2
2.40— 3 40	Drawing	3 " 2
3.45— 5.30	Reading.....	3 " 2
Thursday, July 10.		
A.M. 8 30— 8 55	Writing	3 and 2
9.00—11.30	Latin Authors.....	3 " 2
11 35—12 35	Botany	3 " 2
P.M. 1.30— 3.30	French	3 " 2
3.35— 4.30	Music.....	3 " 2
Friday, July 11.		
A.M. 8.30—10 00	Latin Gram. & Prose	3 and 2
10.05—12.05	German.....	3 " 2
P.M. 1.30— 3.30	English Literature..	2
3.35— 5.05	Chemistry.....	2
Saturday, July 12.		
A.M. 9.00—11.00	English Grammar...	2
11.05—12.35	Geography	2
P.M. 2.00— 3.45	Algebra.....	2
Monday, July 14.		
A.M. 8.30—10.30	Arithmetic	2
10.35—12.05	History	2
P.M. 1.15— 3.15	Euclid	2
3 20— 5.20	Natural Philosophy	2

A worthy Quaker thus wrote: I expect to pass through this world but once; if, therefore, there be any kindness I can show, or any good thing I can do, any fellow human being, let me do it now. Let me not defer or neglect it, *for I shall not pass this way again.* Let this be my epitaph:

What I spent, I had;
What I saved, I left behind;
What I gave away I took with me.

Mathematical Department.

SELECTED PROBLEMS,

SUITABLE FOR FIRST AND SECOND-CLASS TEACHERS' EXAMINATIONS, WITH

SOLUTIONS.

1. What must be the rate of interest so that a sum of money may double itself in 20 years at compound interest?

Given Log 2 = ·301030; log 20705 = 4·3160752 and log 20106 = 4·3160962.—*Intermediate Arts, London, 1882.*

Let M = amount, P = principal, R = amount of £1 for 1 year, and n = number of years. Then $M=PR^n$, but $M=2P$, $n=20$.

$\therefore\ 2P=PR^{20}$, *i.e.* $2=R^{20}$, $\therefore$ log 2 = 20 log R = ·301030

$\therefore$ log R = ·0150515, whence log 2 R = ·3160815

But log 2·0705 = ·3160752

Difference = ·0000063

Now, log 20706 − log 20805 = ·0000210, which is the difference for unity.

$\therefore$ ·0000063 is the difference for $\frac{63}{210} = \cdot 3$

$\therefore$ 2 R = 2·07053 and R = 1·035265, $\therefore$ rate per cent. = 3·5265.

2. If n be a whole number, what is the least value of n for which $(\frac{2}{3})^n$ is less than $\frac{1}{8}$? *London Matriculation, 1882.*

Given $(\frac{2}{3})^n < \frac{1}{8}$; $\therefore\ n \log (\frac{2}{3}) < \log (\frac{1}{2^3})$

$\therefore\ n(\log 2 - \log 3) < (-3)\log 2$

or, $n(\log 3 - \log 2) < 3 \log 2$

$$\therefore\ n < \frac{3 \log 2}{\log 2 - \log 2'},\ \textit{i.e.},\ < \frac{\cdot 90309}{\cdot 1760913},\ \textit{i.e.},\ < 5\cdot 1$$

Now since n is to be a whole number, n must = 6.

3. Find the condition that x^2+ax+b and $x^3+a_1x+b_1$ may have a common divisor $x+c$. Prove that this common divisor will also divide $ax^2+(b-a_1)x-b_1$.—*London 1st B.A., 1882.*

Divide x^2+ax+b by $x+c$, remainder $= c^2-ac+b$, which must $=0$ since $a+c$ is a divisor; $\therefore\ b=c(a-c)$. (A.)

Again, divide $x^3+a_1x+b_1$ by $x+c$, remainder $= -c^3-x_1x+b_1 = 0$, as before; $\therefore\ b_1=c(a_1+c^2)$. (B.)

Lastly, divide $ax^2+(b-a_1)x-b_1$ by $x+c$, and the remainder $= ac^2-c(b-a_1)-b_1$.

[NOTE.—These remainders are found by substituting $-c$ for x in the expressions. See *Teachers' Handbook.*—ED.]

Now, if this last remainder $=0$, the third expression is exactly divisible by $x+c$. Substitute the values of b and b_1 found above, and we have $ac^2-c(b-a_1)-b_1 = ac^2-c\{c(a-c)-a_1\}-c(a_1+c^2)$

$$= ac^2-ac^2+c^3+a_1c-a_1c-c^3 = 0.$$

Hence the expression is divisible, and the conditions are (A) and (B).

4. Find r and s in terms of a and b, p and q, so that $x^4+px^3+qx^2+rx+s$ may be divisible by x^2+ax+b, whatever x may be.—*London Matriculation, 1880.*

Find the remainder when expression is divided by x^2+ax+b and put this remainder $=0$, thus:—

1	1 + p + q	+ r + s	
$-a$	− a	$-(ap-a^2)$	$-(aq-ab-a^2p-a^3$
$-b$		− b	$-(bp-ab)-b(q-b-ap+a^2)$
	$1+(p-a)+(q-b-ap+a^2)$		

Now we must have each column of the remainder $=0$,

i.e., $\therefore\ r-bp+2ab-aq+a^2p-a^3=0$, $\therefore\ r=bp-2ab+$ &c.;

also $s-b(q-b-ap+a^2)=0$, $\therefore\ s=b(q-b-ap+a^2)$.

If $x=0$, dividend $=s$, and divisor $=b$

$\therefore$ For division to succeed, we must have $s=nb$, where n = a whole number.

5. Find the side of a square inscribed in a semi-circle whose radius is 5 feet.—*Pupil Teachers' Examination, 1879.*

Let FG be the diameter, A and E the corners on the circumference, and B and D the corners of the square $AEDB$ on FG. Join O, the centre, with A and E.

Then (I. 47) $OA^2=AB^2+OB^2$

$=5OB^2$, (see cor. II. 4).

$$\therefore\ OB^2 = \frac{OA^2}{5} = 5,\ \textit{i.e.},\ OB=\sqrt{5}$$

Now side of square $= 2OB = 2\sqrt{5} = 4\cdot 472136\ldots$

6. Show that $\frac{e}{2}=\frac{1}{|\underline{2}}+\frac{1+2}{|\underline{3}}+\frac{1+2+3}{|\underline{4}}+\ldots\ldots ad\ inf.$

Series $e=1+1+\frac{1}{|\underline{2}}+\frac{1}{|\underline{3}}+\frac{1}{|\underline{4}}+\ldots\ldots ad\ inf.$

$\therefore \frac{e}{2}=\frac{1}{2}+\frac{1}{2}+\frac{1}{2\,|\underline{2}}+\frac{1}{2\,|\underline{3}}+\frac{1}{2\,|\underline{4}}+\ldots\ldots ad\ inf.\ldots\ldots(A)$

Now sum of the A. P. $1+2+3+4+\ldots\ldots n=\frac{n(n+1)}{2}$

$\therefore \frac{1+2+3+4+\ldots\ldots+n}{|\underline{n+1}}=\frac{n(n+1)}{2\,|\underline{n+1}}=\frac{n(n+1)}{2(n+1)n|\underline{n-1}}=\frac{1}{2\,|\underline{n-1}}$

Now when $n=2$, $\frac{1+2}{|\underline{3}}=\frac{1}{2}$

" $n=3$, $\frac{1+2+3}{|\underline{4}}=\frac{1}{2\,|\underline{2}}$

" $n=4$, $\frac{1+2+3+4}{|\underline{5}}=\frac{1}{2\,|\underline{3}}$, and so on.

Substituting these values in (A) we get the required expression.

7. A man has 1000 apples for sale; he sells at first so as to gain at the rate of 50% on the cost price. He sells the remainder for what he can get, losing thereby at the rate of 10%. His total gain is at the rate of 29%. How many apples did he sell at the losing rate?—*Science and Art Examination, 1882.*

Let x= number @ 50% gain, $\therefore$ $1000-x$ = number @ 10% loss.

$\therefore$ Gain on first lot $=\frac{x}{2}$ apples,

and loss on second lot $=\frac{1000-x}{10}$ apples.

$\therefore$ Total gain $=\frac{x}{2}-\frac{1000-x}{10}=29\%=290$ apples.

$\therefore$ $x=650$; remainder $=350$.

8. If $z=\sqrt{(x^2+y^2)}$, show that

$$x+y+z\ :\ -x+y+z\ ::\ x-y+z\ :\ x+y-z.$$

—*Science and Art Examination, 1881.*

$z^2=x^2+y^2$, $\therefore$ $2z^2=2x^2+2y^2$, or $z^2-x^2-y^2=x^2+y^2-z^2$

Add $2xy$ to both sides, and

$$z^2-(x-y)^2=(x+y)^2-z^2$$

i.e., $(z+x-y)(z-x+y)=(x+y+z)(x+a-z)$ whence, &c.

9. Solve the following sets of equations, finding all the values of x, or x and y.—*Science and Art Examination, 1881.*

(*a*) $\frac{1}{x+a}+\frac{1}{x+b}=\frac{1}{a-x}+\frac{1}{b-x}$.

Transpose, $\frac{1}{a+x}-\frac{1}{a-x}=\frac{1}{b-x}-\frac{1}{b+x}$

i.e., $\frac{-2x}{a^2-x^2}=\frac{2x}{b^2-x^2}$ $\therefore$ $x=0$

$\therefore$ $-b^2+x^2=a^2-x^2$ $\therefore$ $x=\pm\sqrt{\left(\frac{a^2+b^2}{2}\right)}$.

(*b*) $x^2+y=51$ and $2x^2+y^2=102$.

Multiply (1) by 2 and subtract $\therefore$ $y^2-2y=0$ $\therefore$ $y=0$ or 2.

Substitute in (1) and $x=\pm 7$ or $\pm\sqrt{51}$.

(*c*) $\sqrt{(x+y)}+\sqrt{(x-y)}=5$, and $\sqrt{(x^2-y^2)}=4\cdot5$

Square 1st and subtract twice 2nd and $2x=16$, $x=8$

Square 2nd and substitute, and $y=\pm 6\cdot6143\ldots\ldots$

10. In a field which grows uniformly 31 oxen can consume $8\frac{3}{4}$ acres in $\frac{3}{4}$ of the time in which 15 oxen would consume $5\frac{1}{4}$ acres, and 22 oxen would require 3 days longer to consume $7\frac{1}{2}$ acres than 20 oxen would require for $6\frac{1}{4}$ acres: in what time would 31 oxen eat up the $8\frac{3}{4}$ acres?—*Colenso's Arithmetic.*

acres.		acres.		oxen.		oxen.	
$5\frac{1}{4}$	:	$8\frac{3}{4}$	=	15	:	25	(1)
$7\frac{1}{2}$	:	$8\frac{3}{4}$	=	22	:	$25\frac{2}{3}$	(2)
$6\frac{1}{4}$	:	$8\frac{3}{4}$	=	20	:	28	(3)

Let u= a certain unit of time: put $4u$= time required by 25 oxen to eat the grass on $8\frac{3}{4}$ acres, $\therefore$ $3u$= time required by 31 oxen.

Then $25:31=3u:3\frac{18}{25}u$;

And $4u-3\frac{18}{25}u=\frac{7}{25}u$ = growth of grass eaten by 25 oxen in one unit of time.

$$\tfrac{7}{25}u:4u=u:14\tfrac{2}{7}u \text{ growth.}$$

$\therefore$ $14\frac{2}{7}u-4u=10\frac{2}{7}u$ = original quantity of grass.

Now 25 oxen in $\frac{7}{25}u$ eat 1 u growth,

$\therefore$ 25 " 1 u " $\frac{25}{7}u$ "

$\therefore$ 1 " 1 u " $\frac{1}{7}u$ "

And $25\frac{2}{3}$ " 1 u " $8\frac{2}{3}u$ " from (2)

And 28 " 1 u " 4 u " " (3)

That is 28 oxen eat $(4u-u)=3u$ of the original growth,

and $25\frac{2}{3}$ " $(3\frac{2}{3}u-u)=2\frac{2}{3}u$ " " "

$\therefore$ $25\frac{2}{3}$ oxen would eat the whole original grass in $10\frac{2}{7}\div 2\frac{2}{3}=3\frac{6}{7}u$,

and 28 " " " " " $10\frac{2}{7}\div 3=3\frac{3}{7}u$.

$\therefore$ The given difference of 3 days $=\frac{3}{7}u$.

But 31 oxen require $3u$ to eat the grass,

$\therefore$ $\frac{3}{7}u:3u=3$ days : 21 days, the time required.

11. If the series of natural numbers 1, 2, 3.....10, 11, 12..... were written down in a row without separating the figures, what would be the 750th figure of the row?—*Bursary Competition, Aberdeen University.*

Up to 99 there are $9\times10\times2+9=189$ figures, and the three figure numbers commence. We require $750-189=561$ figures more.

$561\div3$ gives 187 numbers of 3 figures each. Hence the last number will be $99+187=286$, and the last figure is 6.

12. Given $(x+y)^{\frac{1}{2}}+(x-y)^{\frac{1}{2}}=a^{\frac{1}{2}}$ (1)

and $(x^2+y^2)^{\frac{1}{2}}+(x^2-y^2)^{\frac{1}{2}}=a^{\frac{1}{2}}$ (2), find x and y.

—*St. John's College, Cambridge.*

Cube (1) by formula $(a+b)^3=a^3+b^3+3ab(a+b)$ and substitute for $a+b$, and we have

$$2x+3a^{\frac{1}{2}}(x^2-y^2)^{\frac{1}{2}}=a,\quad \therefore\ x^2-y^2=\frac{(a-2x)^3}{27a} \qquad (A).$$

Then from (2) $(x^2+y^2)^{\frac{1}{2}}+\frac{a-2x}{3a^{\frac{1}{2}}}=a^{\frac{1}{2}}$.

Cubing as above $x^2+y^2=\frac{(2a+2x)^3}{27x}$ (B).

(A) + (B) gives $54ax^2=(2a+2x)^3+(a-2x)^3$

$$=9a(a^2+2ax+4x^2)$$

$$\therefore\ x^2-ax=\tfrac{1}{2}a^2,\ \text{whence } x=\tfrac{1}{2}a^2(2\pm\sqrt{3}).$$

Substitute for x in (B) and

$$\tfrac{1}{2}a^2(2\pm\sqrt{3})+y^3=\frac{a^3(18\pm10\sqrt{3})}{9}$$

$$\therefore\ y=\tfrac{1}{6}a\sqrt{(36\pm22\sqrt{3})}$$

$$=\frac{a}{2}\left(1-\frac{1}{\sqrt{3}}\right)\sqrt{\left(1-\frac{4}{\sqrt{3}}\right)}$$

ONTARIO EDUCATION DEPARTMENT.

SECOND CLASS TEACHERS, JULY, 1883.

1. Prove that $\frac{1}{4}$ of $\frac{3}{7}=\frac{3}{28}$.

Let $\frac{1}{4}$ of $\frac{3}{7}$ = value.

$\therefore$ the whole of $\frac{3}{7}$ = value $\times$ $4=\frac{1}{1}+\frac{1}{7}+\frac{1}{7}+\frac{1}{7}$

$\therefore$ value $\times 28=1+1+1+1=3$

$\therefore$ value $=3\div28=\frac{3}{28}$.

N.B.—In this proof we have assumed multiplication and division of equals by the same, $\frac{4}{4}$ or $\frac{7}{7}=1$, and that a fraction expresses the division of numerator by denominator.

Simplify $(2\frac{2}{7}$ of $3\frac{1}{16})+\frac{4}{9}-(1\frac{1}{3}$ of $1\frac{5}{16}-(1\frac{3}{4}$ of $4\frac{4}{7}$ of $\frac{8}{14})$

$=\quad 7+\frac{4}{9}-7-\frac{1}{7}^2=-1\frac{7}{63}$.

2. The pendulum of one clock makes 24 beats in 26 seconds; that of another, 36 beats in 40 seconds. If they start at the same time, when first will the beats occur together?

1st will make its 120th and 2nd its 117th beat at the end of the 130th second. Answer, 2′ 10″.

3. *A* can do as much work in 4 hours as *B* can in 6; *B* in $3\frac{1}{2}$ as

C in 5. A does half a certain piece of work in 12 hours; in what time can it be finished by B and C, working separately equal times, and C succeeding B?

A in $28 = B$ in $42 = C$ in 60, $\therefore$ amounts are as 14:21:30. A does work in 24 hrs. $\therefore$ B in 16 hrs., and C in $\frac{160}{7}$ hrs. In 1 hr. B does $\frac{1}{16}$ and C does $\frac{7}{160}$ work. In 1 hr. both will do $\frac{1}{16}+\frac{7}{160}=\frac{17}{160}$ work. If both worked together they would finish in $\frac{160}{17}$ hrs., but as they come one after the other they will require twice as long, $=\frac{320}{17}=18\frac{14}{17}$ hrs.

4. A note for \$500, made March 9, at 3 months, is discounted April 11, at 8%. What is received for the note? (True discount.)

59 days at 8% gives $\frac{59}{365}$ of $8=\frac{472}{365}$ of a dollar interest on each dollar of face value.

$\therefore$ Discount $=\frac{472}{837}$ and P. W. $=\frac{365}{837}$ of face value.

Then $\frac{365}{837}$ of \$500 = &c.

5. The unclaimed dividends on a certain amount of stock which pays 6% per annum amounted in 3 years to \$1152. The stock was sold at a discount of $12\frac{1}{2}$% on its par value. What sum was realized?

As no rate of interest is mentioned, we assume that the dividends do not accumulate.

3 years' dividends = \$1152 = 18% of stock = $\frac{18}{100}$ stock

$\therefore$ stock $= 115200 \div 18$. At a discount of $\frac{1}{8}$.

Value $=\frac{7}{8}$ of $115200 \div 18 =$ \$5600.

6. Teas at 3s. 6d., 4s., and 6s. a pound, are mixed to produce a tea worth 5s. a pound. What is the least integral number of pounds that the mixture can contain?

Marking the gains per pound with +, and the losses with −, we have

$$+\ 1\tfrac{1}{2},\quad +\ 1 \text{ and } -\ 1.$$

Now the total gain must equal the total loss. It is evident that 2lbs, 1lb, and 4lbs are the smallest *integral* numbers which will make the loss balance the gains. $\therefore$ Ans. = 7lbs.

7. A man buys 150 pounds of sugar, and, after selling 100 pounds, finds that he has been parting with it a loss of 5%. At what rate per cent. advance on the cost must he sell the remaining 50lbs that he may gain 10% on the entire transaction?

To make 10% he needs to get the cost price of 165lbs.

He sold 100lbs for the cost of 95lbs.

He must sell 50lbs for the cost of 75lbs.

i.e., at the rate of 100 for 150, $\therefore$ advance = 50%.

8. Each member of a pedestrian club walks as many miles as there are members in the club. The total expense is £50 13s. 11d. How many members are there?

If there are x members, each walks x miles, at x pence per mile, $\therefore$ x^3 is the cost in pence of the whole trip = 12167 pence.

i.e., $x^3 = 23^3$, $x = 23$ members.

9. The hour, minute, and second hands of a watch are on concentric axes. When first after 12 o'clock will the direction of the second hand produced backwards bisect the distance between the other two?

The rate of the extremities of the hand are as 1:12:720 respectively, for the hour hand goes round the circle once, the minute hand twelve times, and the second hand seven hundred and twenty times in the course of twelve hours. Suppose the hands in the position described in the question. The reader may draw a figure, placing A at the end of the hour hand, B at the end of the minute hand, and C at the extremity of the second hand. Let the second hand be produce backward half way between A and B. Mark the point D. Call the distance from XII. to D one space, then A to B is 11, and B to C 108 spaces. Also observe that B to C is the same as C to A.

$\therefore$ 11 spaces + 708 spaces + 708 spaces = circle = 60 min.

$\therefore$ 1 space $= 60$ min $\div 1427 = 30\frac{390}{1427}$ sec.

ELEMENTARY ALGEBRA.

1. Find the factors of $(a-b)^5+(b-c)^5+(c-a)^5$.

Suppose a were to become$=b$, we should have left $(b-c)^5+(c-b)^5$ which is $=0$. This shows that when $a-b=0$ the whole expression $=0$, and from this we infer that the expression itself is of the form $(a-b)Q$ where Q is the exact quotient when $a-b$ is divided into the expression. For if $a-b$ did not divide the expression exactly but left a remainder, R, which has no longer contained $a-b$, then it would be of the form $(a-b)Q+R$, and when $a-b=0$ the first term would vanish but the remainder, R, would not vanish. Hence it is plain that if the whole expression becomes zero when any particular letters become zero, these letters must be exact factors. Thus, in the case before us $(a-b)$ is a factor, similarly $(b-c)$ and $(c-a)$ are factors, therefore their product $(a-b)(b-c)(c-a)$ is a factor of the given expression.

Now the given expression is of five dimensions, and therefore must have factors to make up five dimensions just as a^5 must $= a, a, a, a, a$. We have found three such factors, corresponding to a, a, a. We must have left two factors corresponding to a, a, or one factor corresponding to a^2. There is no other supposition possible. But we cannot have two other factors of one dimension like a and b, or like $a+b$, and $b-c$; for a, b, and c occur throughout the expression in precisely the same manner, *i.e.*, wherever there is an a^5 there is a b^5 and a c^5, etc. So that if a and b were factors c must also, from the symmetry of the expression, be a factor, and thus abc would be a factor, which with the three factors already found would give *six* dimensions instead of five. Similarly it is of no use to try $a+b=0$ as a factor. Therefore the remaining part of the expression must be a single factor of two dimensions.

Now a factor of two dimensions in a, b, and c can only contain terms made by taking a into a, b, and c, b into a, b, and c, and c into a, b, and c, *i.e.*, it can only have terms of the form a^2, ab, ac, b^2, bc, c^2. Looking at these we see that they are all of two kinds, viz.: *Squares* like a^2, b^2, c^2, and products like ab, bc, ca.

Hence the factor we are searching for must be of the form $K(a^2+b^2+c^2)\pm P(ab+bc+ca)$, where K and P are numerical and include any numerical factor that might belong to the rest of the expression. $\therefore$ $(a-b)^5+(b-c)^5+(c-a)^5$ must

$$=(a-b)(b-c)(c-a)\{K(a^2+b^2+c^2)+P(ab+bc+ca)\}.$$

To find K and P, put $c=0$ and we have

$$(a-b)^5+(a^5-b^5)=(a-b)(-ab)\{K(a^2+b^2)+P(ab)\}.$$

Divide this by $a-b$, and

$$(a-b)^4-(a^4+a^3b+a^2b^2+ab^3+b^4)=-ab\{K(a^2+b^2)+P(ab)\}.$$

i.e., $-5ab(a^2-ab+b^2)=-ab\{K(a^2+b^2)+P(ab)\}$

or, $5(a^2+b^2)-5ab=K(a^2+b^2)+P(ab)$.

And as these are not only equivalent but *identically the same*

$\therefore$ K must $= 5$ and $P = -5$.

So that the whole expression must

$$=(a-b)(b-c)(c-a)\{5(a^2+b^2+c^2)-5(ab+bc+ca)\}$$

i.e., expression $=5(a-b)(b-c)(c-a)(a^2+b^2+c^2-ab-bc-ca)$.

NOTE.—We have written down every step of this process because no explanation of this method is given in any of the ordinary text-books, and students generally experience considerable difficulty in obtaining a grasp of it. See *McLellan's Teachers' Handbook*, pp. 87 and 229, for a concise statement of it.

2. Factor $a^3(b^2-c^2)+b^3(c^2-a^2)+c^3(a^2-b^2)$.

As in (1) we see by inspection that $(a-b)(b-c)(c-a)$ is one factor.

Also as in (1) we see that the remaining part must be a single factor of two dimensions of the form

$$P(a^2+b^2+c^2)+Q(ab+bc+ca).$$

$\therefore$ $a^3(b^2-c^2)+b^3(c^2-a^2)+c^3(a^2-b^2)$

$$=(a-b)(b-c)(c-a)\{P(a^2+b^2+c^2)+Q(ab+\&c.)\}$$

Put $c=0$ and we get

$$a^3b^2-a^2b^3=(a-b)(-ab)\{P(a^2+b^2)+Q(ab)\}$$

or $a^2b^2(a-b)=$ " " " "

$\therefore$ $-ab=P(a^2+b^2)+Q(ab)$, which shows that $P=0$, and $Q=-1$

$\therefore$ Expression $=(a-b)(b-c)(c-a)(-ab-bc-ca)$.

We subjoin a few more examples for practice and additional ones may be found in the *Teachers' Handbook passim*.

3. $a^3(b+c-a)^2+b^3(c+a-b)^2+c^3(a+b-c)^2+abc(a^2+b^2+c^2)$
$+(a^2+b^2+c^2-bc-ca-ab)(b+c-a)(c+a-b)(a+b-c)$
$=2abc(bc+ca+ab)$.

4. $2(a+b+c)^3-(a+b)^3-(b-c)^3-(c+a)^3+3abc$
$=3(a+b+c)(ab+bc+ac)$.

5. $(y-z)^5+(z-x)^5+(x-y)^5$
$=5(x-y)(y-z)(z-x)(x^2+y^2+z^2-xy-yz-zx)$.

6. $(a-b)^4+(b-c)^4+(c-a)^4=2(a^2+b^2+c^2-ab-bc-ca)^2$.

7. $(a+b+c)^5-(a^5+b^5+c^5)$
$=5(a+b)(b+c)(c+a)(a^2+b^2+c^2+ab+bc+ca)$.

8. $a^4(b-c)+b^4(c-a)+c^4(a-b)$
$=-(a-b)(b-c)(c-a)(a^2+b^2+c^2+ab+bc+ca)$.

C. C.

Correspondence.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR,—As the question whether literature or science is the more effectual means in the development of the intellectual and moral nature has lately been before the public, I imagine the subject may yet be of sufficient interest to justify the expression of a few ideas through your popular journal. In the prosecution of my work as a practical educator it has often occurred to me that too much attention is paid to science. For a while science cast literature, with its life-giving and nourishing influence, completely into the shade. It was the fashion to speak of a proficiency in mathematics, and an expertness in solving problems resembling the renowned fifteen puzzle, as the great end of education. I am not opposed to science or mathematics in the work of education, but I maintain that the higher qualities of the mind are cultivated by other means, and that considerable latitude should be allowed in regard to the requirements of those studying these branches. There are persons who have a scientific or mathematical aptitude, but there are others who possess high and important qualities who look upon such studies with positive distaste. There are individuals who can see shades of thought, meaning, and humor in literature which others can never see; what if the aptitude of the one class should be the gauge to measure the abilities of the other? It would be just as reasonable, I apprehend, in a case of this sort as any other. Many men have achieved distinction in certain walks of life, and even made their names immortal, who would run a chance of being "plucked" at some of our examinations, even after careful preparation. There is, perhaps, too much difficulty in our examinations in some respects. It is right and proper for men and women to be trained for their life-work—and I believe in a long and gradual course of training—but it is in the doing of that work, principally, that they should stand or fall to a great extent, and in which they shall eventually stand or fall. The professions and occupations may be crowded, but there will be the survival of the fittest, and the only proper way to know who can do the work required of him, is to let him try it. Many a man is ruled out on account of his not being proficient in intellectual gymnastics, who might otherwise do good work in the profession from which he has been excluded. We cannot all be Hanlans or Westons, but we can row a boat well enough, and walk far enough and fast enough, to get through the practical work of every-day life, perhaps as well as they. I admit that examiners may be conscientious in prescribing such large doses of science, for the purging of the mind and training of the intellect. It depends a good deal on the opinion an educator has as to what a properly developed man should be, what means he takes to educate him. If a man is to be trained principally to amass wealth, and to get ahead of his fellow-men generally, a scientific education principally will not prevent his doing so. Science may train the perceptive and reasoning powers, but the finer forms of perception and the higher powers of reason are reached only by the lofty thoughts of noble minds. Literature is nourishing, life-giving; science is not. Literature partakes of the nature of the soul of man; science is more useful in the common meaning of the term, but lower. But the traditions and history of ages, and the natural respect and admiration of men for the literary qualities in other men, prove that literature occupies high ground, that it contains life, and thought, and power.

Port Albert, March, 1884. T. F. YOUNG.

NOTES.—1. We welcome fresh and practical correspondence; but brethren, be brief, and strike out into your subject in the first sentence.

2. We hardly perceive what Brother Young aims at. He is not sufficiently definite, and we do not know what particular reform he wants. Literature is getting pretty fair attention, and the programme for higher certificates provides for options fairly well. Those "aptitudes" can switch off, we fancy, at a reasonably early period.

3. Examinations secure "the survival of the fittest" moderately well, even under present conditions. Brother Young should consider the misery of students who have no "aptitude" for literature, and cancel it against the other misery.—EDITOR.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR,—I wish to call attention to an article on "Pedagogics" in the Practical Department of the JOURNAL for March.

The writer remarks:—"There is in the minds of the thoughtful to-day a growing discontent with the results of our educational system." In support of this statement he goes on to say:—"A successful business man not long ago said, 'I have sent my son to school for seventeen years; he has graduated with honor at one of our most noted universities, and now he does not know how to do anything." That father seemed to think his duty had been faithfully performed when he had merely introduced his son to this world and handed him over to the schoolmasters. The truth is that the fault in this case lay not in the school system, as we are left to infer, but in the home training; unless, indeed, nature herself was at fault, which is not at all improbable.

It is true that the results of our educational system are often unsatisfactory. There is a vast difference between our young people as they are and as they ought to be. But the writer of the article on "Pedagogics" makes the mistake of confounding our *educational* system with our *school* system. The school system is in reality only one of a system of educative forces acting on the child, the combined effects of which ought to produce a perfect man. The home, the church, society, have a work to do in the development and training of the child, which the school cannot do alone, and which ought not to be expected of it. Now, I am quite willing to admit that our school system is by no means perfect; but I am not willing that it should have to answer for sins that ought to be charged elsewhere. The province of the school is to give such training and impart such knowledge as *every* person, whether farmer, artisan, or professional man, ought to have to fit him for the work of life. That is to say, its training should be general, not special. The best place to learn agriculture or any of the trades is on the farm or in the shops. If a father sends his son to school expecting him to come out a thoroughly equipped business man or mechanic, and there appears a "calf" instead, that father has only himself or his son to blame for the disappointment. Parents make the mistake, I repeat, of expecting the school to do what it never was meant to do. Children ought to be sent to school for a purpose. If "nine-tenths of the human race have to earn their bread by daily toil," let parents be content with giving their children a sound elementary education at school and then put them under special training for whatever is to be their life-work.

In the last paragraph of the article in question I find this statement: "Our schools, instead of fitting the young for the practical duties of life, really unfit them.....The scholar goes out of school with a distaste and disrespect for honest manual labor."

Now, in as far as this is true—and I think it by far too sweeping an assertion—the cause is to be found in the home influence rather than in that of the school. It does not prove the contrary to say that the most hard-working of fathers and mothers often have idle and useless sons and daughters, who disdain to soil their hands with honest toil; for these are the very fathers and mothers

who often are too *lazy* to train their children to work; it is easier to do it themselves. There are, doubtless, exceptions, but as a rule it is for parents to say whether their children shall grow up with a distaste for manual labor; the school is almost neutral in the matter.

Thanking you, Mr. Editor, for the space,

I remain, yours truly,

TEACHER.

To the Honorable THE MINISTER OF EDUCATION.

SIR,—I have the honor to submit the accompanying *résumé* of the result of the visits made by Principal MacCabe and myself, in accordance with instructions received from you.

The Normal Schools visited were the City Normal School in Boston, and the State Normal Schools at Bridgewater and Salem, in the State of Massachusetts. In the State of New York we visited the following: Albany, Oswego, and Buffalo. Besides these, as the opportunity presented itself, we visited the Collegiate and Polytechnic Institute in Brooklyn, and the Stevens Institute of Technology in Hoboken, in order that we might ascertain how the Physical Sciences are taught. In the former especially, we saw good points, particularly their mode of dealing with backward pupils. The Drawing done by the pupils was especially commendable. The arrangement of the Laboratories for Chemical manipulations is very complete.

In the Stevens Institute we met Professor Meyer, of the Physical Department, who took great pains to show us though his Laboratory and to perform some experiments for us. Similar kindness had been shown us by Dr. Thurston, Professor of Mechanical Engineering. We also had the pleasure of seeing the pupils at work in the workshop. Our next visit was paid to the City Normal School in Boston, under Dr. Dunton. Here as elsewhere we were unfortunate in the time of our visit. With the exception of this school a new term has just begun in all the Normal Schools, while here the Principal had sent out his graduating class to teach in the Public Schools of the city, so that we had no opportunity of seeing any classwork. We, however, gained a good deal of information from conversation with the Principal. We also had an opportunity of watching the teaching done in one class of the Primary school by a lady teacher of marked activity and fertile in expedients.

At Bridgewater we found that, while each sex has an ante-room, the general class room was used as a waiting room, in which ladies and gentlemen mingled freely, while some were availing themselves of the Reference Library, which occupies one end of the class room. Attached to this school is a boarding-house, under the charge of the Principal, in which all students who are not residents of the town are required to board. We had the pleasure of dining in Hall and witnessing this peculiar feature of Normal School home and family life. In this school printed instructions for the guidance of the students, both in school and boarding hall, are given to each student. We obtained copies of these instructions. They are an admirable code of laws.

At Salem we found a class of 207 ladies, and had an opportunity of witnessing the teaching of certain classes by several of the Normal School Faculty. Here, as in Bridgewater, great attention is paid to Vocal Culture, both in connection with the exercises in Reading and Music and to pose of body. A similar remark may be made respecting Constitutional History. We saw a class in Experimental Chemistry: the work being performed by the students themselves, under direction of the Professor, but without any previous illustration by him. They were required to perform the experiment; to observe carefully, the essential points of the observation being written on the blackboard by one of the class; and lastly to draw the inference, the references being placed on the blackboard, in another column, thus:—

Experiment.	Observation.	Inference.

In every study the students, in turn, occupy temporarily the place of the teacher of their class-mates; and are subject to their catechisms as well as those of their regular teacher. Teaching exercises of various kinds form a large and important part of the school work. During the senior term object teaching is made a specialty.

One very peculiar feature of this school is the teaching of Carpentry to such ladies as desire to learn. We saw some very creditable work that had been done by the young ladies. Besides the physical exercise involved, this work makes them practically familiar with straight lines, angles, and measurements, besides rendering them independent in their own schools if they desire to hang a blind or repair a map.

A most noteworthy feature in connection with this school is the extremely small amount of trouble given by the heating apparatus. There is no regular engineer: the janitor attends to the furnace and boilers. When we were at the school at one o'clock, the janitor had not visited the boiler room since seven a.m.

Albany.—At this school we found 258 students, of whom about 200 were ladies. We had the pleasure of listening to Principal Waterbury's Lecture on Moral Philosophy, which was of a conversational character, interspersed with questions. We attended recitations in several classes, the topical plan being used here as it generally is in the Normal Schools. In the Physical Science Room we listened to a topical explanation of the three kinds of lever.

Here, as in Bridgewater, free intercommunication between the sexes is allowed with certain restrictions. At the beginning of the session the Principal hands to each student a card on which is a suggested distribution of the whole twenty-four hours. Each student reports at the end of the first five weeks how far this suits her or him. When decided on, each student reports every five weeks how far he or she has observed this rule of distribution. A very curious practice obtains here: the students are weighed every five weeks, with the double object of determining their physical development and of keeping up the fare at their boarding-house. We found the Practice School under the charge of a lady teacher and her assistant, who do no teaching, but simply illustrate methods to the Normal School students and criticise the work done in their presence. The pupils of the Practice School are broken up into a number of sections of two or three, and sometimes more. Each of these sections is in charge of a Normal School student. All the sections of the same class have the same work, and when the Normal School teachers have finished the pupils are subjected so an oral examination by the Lady Principal and her assistant, who supplement and, if necessary, rectify the students' work. In the afternoon the students have to visit the city schools and submit to the President their written criticisms. The students are set to work at once to teach, without having any opportunity of seeing a class taught either in the Normal or the Practice School.

Oswego.—In this school, under Principal Shelden, we witnessed more practical work than in all the other schools visited. We attended many of the classes, and were delighted with what we saw and heard. There is an amount of real downright honest work done in this school, which has to be seen to be thoroughly appreciated.

We had an opportunity of listening to a special and a general criticism, given by the Lady Principal of the School of Practice, who, besides being a teacher of Methods of Teaching Geography

and Color, is the Critic, being ably assisted by the lady who has charge of the Methods of Teaching Form, Penmanship, and Drawing. The work of criticism was done *fearlessly*, every point being fully dwelt upon.

Spending, as we did, two days in this school, we witnessed many of the exercises both by members of the Faculty and by students in training. We have no hesitation in saying that more practical good may be obtained by visiting this school than by wandering about from school to school.

Buffalo.—The work done in this school is not unlike that done in Oswego, though possibly the criticism is not so searching; this may be owing to the fact that the Critic—a lady—is a new addition to the Faculty. Besides the criticism given by the Critic on work done before her in the Normal School and in the School of Practice, the student is subjected, as with us, to criticism by the teacher of the class. We witnessed work in several classes, and in the Drawing class found the students drawing from models made by themselves.

REMARKS.

In attempting to estimate the success of these schools, and in comparing their work with ours, it must be remembered that their session extends over a period of two years. They profess, as we do, to take up their academic work from a teacher's standpoint; that is, to present each subject as it is *to be taught*, and *in the way in which it ought to be taught*. The object, then, is to have the students, in learning any subject, learn also the best form in which it can be placed before pupils. This work is most successfully carried out. As far as time permits our Normal Schools do just as good work in this way. Making due allowance for our short time we do as much as they. We are of opinion, however, that the best results in this way can be attained only by making one session in the year in our Normal Schools—January to December, with July and August intermission; January to June, inclusive, Academic and Professional combined; September to December more strictly professional work. When the plan of reviewing the subjects of the Academic or Non-professional course was introduced into the Normal Schools, it was so introduced because it was found necessary to do so. The time was then extended. A further extension is necessary in order to have good work. Each school could take 120 students and thus keep up the number.

In connection with the review of subjects from a teacher's standpoint, we notice the importance attached to the topical arrangement of the matter. This seemed to work well.

The professional training in these schools, especially the Oswego one, was really training. The plan of giving a student a whole month, or a whole week, or even a whole day, at teaching is very much better than our plan of having an hour or two each day. This broken manner of carrying on the practice tells against our students, and the mixing up of subjects of non-professional study with this work spoils both. If a whole day were given once a week it would be better.

We notice particularly their system of notes on lessons; their criticisms—those of the students and of the critic teacher—and have learned much from these. In Oswego, the care taken in criticising the lessons cannot fail to make good teachers.

In the State of New York each principal receives a salary of $2,500. In Boston the principal of the Normal School has a salary of $3,800, while the principal of the Training department, who teaches two hours per day—the morning being devoted to routine work and oversight—enjoys a stipend of $2,880. In the other schools of Massachusetts the salary of the principal averages $3,000.

Know how sublime a thing it is,
To suffer and be strong.—*H. W. Longfellow.*

Special Articles.

THE STUDY OF SCIENCE.*

When a student has mastered the propositions of the First Book of the Elements, he may then learn how they may be applied both in the demonstration of Theorems and the construction of Problems. If the construction of Problems does not readily appear from the principles, let the analysis be attempted. Construct the diagram which represents the data and quæsita, and suppose the quæsita known, and trace back the steps which connect the quæsita with the data. When this is effected, the reverse of the process constitutes the solution of the Problem.

A correct diagram will be found most useful in suggesting the steps by which a Theorem is to be demonstrated. If the student will ask himself why he takes any particular step, he may avoid the habit of random guessing, and will more certainly discover the correct and direct process for effecting the demonstration. In framing a demonstration, that form is the better which proceeds directly or indirectly from principles, with the aid of a correct diagram. When a Theorem admits of more than one form of demonstration, that form is to be preferred which is the least tedious.

It should be remembered that Cambridge is not an infirmary for the weak and feeble-minded, but an Intellectual Gymnasium, where a student may develop and strengthen his mental powers by a course of disciplinal studies in the languages and sciences.

The following opinions describe the utility of the Mathematical Sciences as the best exercises for mental discipline:—

Roger Bacon considered that logic was to be dethroned, and its position replaced by two other subjects, which he regarded as the portals of all knowledge, the study of language and the Mathematical Sciences. He assigns to Mathematics the foremost place. Divine Mathesis (he writes), and she alone, can purge the intellectual vision, and fit the learner for the acquirement of all knowledge.

Lord Ashburton, in a letter, has stated that "Geometry will afford to the young lawyer the most apposite examples of close and pointed reasoning."

Professor Leslie has remarked that "the Demonstrations left by the Greek Geometers are models of accuracy, clearness, and elegance—admirably calculated for training the minds of youth to habits of close reasoning and luminous arrangement."

The late eminent Lord Chief Justice Cockburn, a member of Trinity Hall, made a passing remark in one of his late charges, to the effect that Euclid's Elements was a mental training second to none.

The late Rev. Dr. Chalmers has stated:—"I am not aware that as an expounder to the people of the lessons of the Gospel I am much the better for knowing that the three angles of a triangle are equal to two right angles: or that the square of the hypothenuse is equal to the squares of the two containing sides in a right-angled triangle. But I have a strong persuasion that both the power to apprehend and the power to convince may be mightily strengthened, and that the habit of clear and consecutive reasoning may be firmly established, by the successive journeys which the mind is called on to perform along the pathway of Geometrical Demonstration. The truth is that, as a preparative, whether for the bar or for the pulpit, I have more value in Mathematics for the exercise which the mind takes as it travels along the road, than for all the spoil which it gathers at the landing place."

The opinion of the late Dr. Whewell, Master of Trinity College, is to the same effect:—

"When a demonstrative science has once been thrown into a rigorous logical form, it possesses a permanence and solidity which eminently fit it for being an element of intellectual education. Euclid's Elements are, to this day, at the same time the best scientific treatise, and the best instrument of mental discipline, which we possess.

* Extract from Preface to New Edition of Potts' Euclid, furnished through the kindness of Robert Potts, M.A., Cambridge, England, author of "Potts' Euclid."

Almost all the alterations which have been made in that work, in more recent times, under the pretence of rendering it more easy, or more compendious, have tended to diminish its usefulness in our system of education. And a person writing an elementary book of Mathematics cannot aim at any higher success than that his work should keep its ground and discharge its office as long and as well as Euclid's Elements of Geometry have done. Yet perhaps it may sometimes appear, both to teachers and students, that it is a waste of time and perverseness of judgment to adhere to the ancient kinds of Mathematics [Arithmetic and Geometry] when we have, in the Modern Analysis, an instrument of greater power and range for the solution of problems; giving us the old results by more compendious methods; an instrument, too, in itself admirable for its beauty and generality. But to this we reply, that we require our *Permanent Mathematical Studies*, not as an instrument, but as an exercise of the intellectual powers: that it is not *for their results* but *for the intellectual habits* which they generate that such studies are pursued. To this we may add, as we have always stated, that, in most minds, the significance of Analytical Methods is never fully understood except when a foundation has been laid in Geometrical studies. There is no more a waste of time in studying Geometry before we proceed to solve questions by the Differential Calculus, than there is a waste of time in making ourselves acquainted with the grammar of a language before we try to read its Philosophical or Poetical Literature."

The late Professor De Morgan, who was unsurpassed for his insight into the fundamental principles of Mathematical Science, and his power of expressing them, printed some remarks on the first six books of Euclid in the "Companion to the Almanack" for 1849 He states: "There never has been, and till we see it we never shall believe there can be, a system of Geometry worthy of the name, which has any material departures (we do not speak of corrections, or extensions, or developments) from the plan laid down by Euclid."

To these opinions may be added that of the late H. J. S. Smith, M.A., Savilian Professor in the University of Oxford:—

"I should not wish to use words which may seem to reach too far, but I often find the conviction forced upon me, that the increase of mathematical knowledge is a necessary condition for the advancement of Science, and if so, a no less necessary condition for the advancement of mankind. I could not argue well for the enduring intellectual strength of any nation of men whose education was not based on a solid foundation of mathematical learning, and whose scientific conception, or in other words, whose notions of the world and of the things in it, were not braced and girt together with a strong framework of mathematical reasoning. It is something for men to learn what proof is, and what it is not: and I do not know where this lesson can be better learned than in the schools of a science which has never had to take one step backwards, which has never asserted without proof, nor retracted a proved assertion; a science which, while ever advancing with human civilization, is as unchangeable in its principles as human reason; the same at all times and in all places; so that the work done at Alexandria or Syracuse two thousand years ago (whatever may have been added to it since) is as perfect in its kind, and as direct and unerring in its appeal to our intelligence, as if it had been done yesterday at Berlin or Göttingen by one of our contemporaries. Perhaps, also, it might not be impossible to show, and even from instances within our own times, that a decline in the mathematical productiveness of a people implies a decline in intellectual force along the whole line: and it might not be absurd to contend that on this ground the maintenance of a high standard of mathematical attainment among the scientific men of a country is an object of almost national concern."

The following examples may serve as a verification of the correctness of the foregoing opinions:—

The account of Edmund Stone is chiefly taken from Dr. Hutton, and it may be cited as an example of true genius overcoming all the disadvantages of birth, fortune, and education.

Edmund Stone was a son of one of the gardeners of the Duke of Argyll. At eight years of age he was taught to read; and at eighteen, without further assistance, he had made such advances in mathematical knowledge as to be able to read the Principia of Newton. As the Duke was one day walking in his garden, he saw a copy of Newton's Principia lying on the grass, and called some one near him to take it back to the library. Young Stone, the gardener, modestly observed that the book belonged to him. "To you!" replied the Duke: "do you understand Geometry, Latin, Newton?" "I know a little of them," replied the young man, with an air of simplicity. The Duke was surprised, and having himself a taste for the Sciences, he entered into conversation with the young mathematician. He asked him several questions, and was astonished at the force, the accuracy and the candour of his answers. "But how," said the Duke, "came you by the knowledge of all these things?" Stone replied, "A servant taught me, ten years since, to read. Does anyone need to know more than the twenty-four letters of the alphabet in order to learn anything else that one wishes?" The Duke's curiosity was redoubled: he sat down on a bank and requested a detail of all his proceedings. "When I first learned to read," said Stone, "the masons were then at work upon your house; I went near them one day, and saw that the architect used a rule and compasses, and that he made calculations. I enquired what might be the meaning and use of these things, and was informed that there is a Science called Arithmetic. I purchased a book of arithmetic and learned it. I was told there was another science called Geometry: I bought the books and learned Geometry. By reading I found that there were good books in these two sciences in Latin: I bought a dictionary and learned Latin. I understood, also, that there were good books of the same kind in French: I bought a dictionary and learned French: and this, my Lord, is what I have done. It seems to me that we may learn everything when we know the twenty-four letters of the alphabet." The Duke, highly pleased with the account, brought this wonderful genius out of obscurity, and provided him with employment which left him leisure to apply himself to the Sciences.

Stone afterwards went to London, where he became known by his talents, and in 1725 was chosen a Fellow of the Royal Society, and wrote several articles which were printed in the Transactions of the Society. He was also the author of a New Mathematical Dictionary, which was published in 1726. In 1730 he printed a Treatise on Fluxions, partly taken from the Marquis de l'Hospital's "Analyse des Infiniments Petits," and in 1766 he put forth "Some Reflections on the Uncertainty of the figure and magnitude of the Earth and on the different opinions of the most celebrated Astronomers."

Having no independent means he was obliged to employ his pen in writing for a subsistence, and he rather injured than increased his reputation by his injudicious productions. His name was erased in 1742 from the Register of Fellows of the Royal Society, and he died in poverty in the early part of the year 1768. Splendid talents, without high moral principle, could not save him from the degradation to which he had reduced himself.

(To be continued.)

BATTALION EDUCATION.

I confess myself appalled sometimes at this problem of what we call educating children, by the scores of thousands. It is easy to recall earlier experiences of different systems, or rather of the workings of methods upon no system, when the individual was not lost in the mass, and self-instruction and self-dependence were the daily lessons. Probably each of us has recollections of incidents and events of our school life spent in widely diversified localities, in other States and nationalities, none of which have but the slightest relationship or similarity to the experiences of the young people of New York city to-day. We can recall, perhaps, the country schoolhouse and the country schoolmaster—the small fraction of the days spent in recitations of lessons learned with more or less diligence at home or in our seats; the well-worn text-books which our older brothers had used before us; the slate and the atlas that had come down even from a former generation; the working out of problems in a self-reliant way; the unassisted application of a book to learn what was in it; the sense of mastery in success, of defeat in failure. Whether hard or easy, it was a struggle on individual account. The *et ceteras* of a gratuitous supply list were unknown. The sense of ownership of our appliances fostered the idea of individual independence. We worked our way for personal advancement, and if we whittled the old desk we did it with our own jackknives.

All this has changed. The experience of such days and places

has no sort of relation, and throws no light upon, the practical problems which present themselves for solution by us now. The question is not how to nurse a child ; it is how to feed an army. Pupils come to us as battalions, not as units. They must be treated in the mass. The bright mind and the dull mind are equally out of their element. The average must be found and all things suited to that. There is little study, it is all instruction. Perpetual uniphonic recitation swells and echoes like the sound of many waters. From the old times, the real work of the scholar is divided by five, the work of the teacher multiplied by five. All this is a peremptory necessity. It has its evils, it has also its compensation. There is virtue in the competition of great numbers. The first vice of youth is conceit. A boy in a New York school early learns his own value. The laggards and the feeble are left, to be sure, but the quick mind has opportunities of hearing and learning to-day of useful things that his father in a country school-house never dreamed of.—*Stephen A. Walker, President of N. Y. Board of Education.*

JUVENILE CRIME.

We hear complaints from all sides of the great and most disheartening increase of juvenile crime. Especially is this the case over in the States, though it is very noticeable in Canada. The dime novels and the wretchedly indecent and immoral weekly publications which are circulated all over the States in hundreds of thousands are generally blamed as the chief causes of such a state of things.

This may account for some of the evil, but not nearly for all. Take our own towns and cities. The most miserable and depraved of the juveniles to be met with in our streets will be found *to read nothing at all.* In too many cases they *cannot* read the simplest sentences in the First Book, and know nothing of JESSE JAMES, or DICK TURPIN, or any other of the kind. But they are perfectly soaked in every kind of iniquity all the same. And how are they so thoroughly and so soon indoctrinated into all the ways of evil? To a very large extent because their parents are drunken, degraded, selfish, and brutalized almost beyond thought From their earliest years these children hear nothing but blasphemy, see nothing but the vilest possible conduct, and receive nothing but the harshest and most unfeeling treatment. How should they know anything of decency? They have been at school ever since they could walk, and that school is one which makes them adepts in swearing, lying, tobacco chewing, whiskey drinking, and every kind of abomination. In many cases they are turned out when almost babies to sell papers, to beg or steal, so as to supply their wretched fathers and mothers with drink, and *they dare not come back empty-handed.* In other cases they are turned into the streets in order not to bother their parents by their presence in the miserable hovels that are called homes. What can be learned in these street classes can easily be ascertained by anyone who will spend an hour or two in the investigation. Every one either knows or may easily be assured of the fact that we have only too many such in Toronto. In one of the evening schools at which philanthropic individuals of both sexes are trying to do some of these boys good almost every one chews, drinks, and swears. Their idea of enjoyment, as they avow it, is to go out of the city, get dead drunk, and lie on the grass.

Almost without exception their parents are drunken, brutalized, and degraded beyond anything to be found among mere savages. In too many instances they are the cast-off illegitimate children of some who are accounted of the "better classes," and many of them will in due time graduate at the Police Court, through the Central Prison, to the Penitentiary and the gallows. Who or what are mostly to blame for most of that festering mass of moral depravity? Not literature even of the dime novel description, but the drinking habits of society, the fallen and the falling character of the parents, the license of the "better classes," the "seduction" which so many would fain call no crime, but only at worst a pardonable indiscretion, and the dram shop at every corner, dealing out its "liquid fire and distilled damnation." The dime literature is no doubt inexpressibly base, the theatrical exhibitions of the low realistic order which are specially patronized by the hoodlums are frightfully corrupting, and many similar things are surely doing their work of death in multitudes of cases. But the relaxation or destruction of family order, the mean housings, and the dissipated habits of multitudes of fathers and mothers are doing more than all to make and increase among us a class of juvenile and precociously depraved practisers of every kind of iniquity, from whom our dangerous classes are continually being recruited, and by whose doings the time and attention of our police and our magistrates are more and more fully taken up.

We in Canada have not yet, as in the States, gangs of juvenile highwaymen, but we have sneak thieves in abundance, and we have precocious and premature depravity, such as it would be difficult to surpass even on the other side. What is to be done to stay this ever rising tide of iniquity? A good deal is already being done, otherwise matters would be much worse than they are. But a great deal more is necessary, and whoever sufficiently helps, be he of the Salvation or any other Army, ought to be welcomed as a coöperator in the war against iniquity in any and every form—iniquity which threatens in the form of drunkenness and other kindred vices to sap the very foundations of society, and to make our boasted civilization appear after all something like, very like, a failure and a sham.—*Toronto Globe.*

OLD ENGLISH SPELLING.

BY WILLIAM HOUSTON, M.A.

There is a very general impression that old English spelling is exceptionally capricious and irregular, and this feeling has a deterrent effect on many who would otherwise be tempted to pay more attention to the English language and its literature in the earlier stages of their history. The best corrective of the erroneous impression referred to is the study of old English, which will amply repay those who take it up intelligently, earnestly, and sytematically, but something may be done to remove it by a reference to well-known and established facts. I do not deny that old spelling is very irregular ; but I do deny that it is either more irregular or more capricious than the present day spelling, and I hope to show that the latter would be greatly improved by a return to some of the old methods.

By "Old English" I mean the language prior to, and including, the period of Spenser, whose text is generally printed as he wrote it, while those of Shakespeare, the authorized Bible, and Milton are modernized before being put into the hands of the modern reader. When one hears the spelling reform movement denounced, therefore, as an interference with "our fine old English spelling," he may take it for granted that the critic never saw the language of Shakespeare, Milton, or the Bible as it appeared when first printed, and that he is so ignorant of the whole subject as not to be aware that the spelling now in vogue is substantially that substituted for the older and better spelling by the finical and often mistaken scholarship of the eighteenth century. Samuel Johnson was the literary dictator of his time. In compiling his dictionary he made an honest attempt to depict the spelling of the language according to the best usage then in vogue, but the usage had changed considerably from that of Milton, and very much from

that of Shakespeare and the Bible—not to speak of Spenser and still older writers—and not always for the better.

In order to be able to determine the comparative excellence of different modes of spelling it is obviously necessary to have some principle to refer them to. What constitutes good spelling? When is one mode of spelling better than another? Is there any general principle underlying our spelling which will serve as a test? Or, are the forms of words determined entirely by usage, which is too often another name for caprice? Spelling reformers contend that there is such a principle. They claim that as spoken language existed before written language the latter should be made to accommodate itself to the former, just as the clothing is made to conform to the body clothed. Written marks make up the dress of spoken sounds, being intended to represent to the eye the spoken language addressed to the ear. In other words, spelling should be phonetic, and the more phonetic it is the better it is. On the authority of Mr. Skeat, one of the foremost English scholars, old English spelling was intended to be phonetic, and it would have been more so than it is but for three causes: (1) the defectiveness of the English alphabet, (2) the carelessness or ignorance of copyists, and (3) the local variations of pronunciation.

I propose to show by means of a few illustrations that if we choose to avail ourselves of them we can get many hints from old English orthographical forms for the improvement of our modern English spelling. We cannot overcome the chief source of confusion and irregularity, our defective alphabet, which has only twenty-three effective letters to represent about forty elementary sounds—three of the letters, *c*, *q*, and *x*, being required to perform phonetic functions already assigned to other letters, *s* and *k*. We might, however, use our alphabet, and also our ordinary orthographical expedients, more consistently than we now do, and in this way greatly enlarge the area of constant orthography which is at present so lamentably small; and any improvement of this kind should be hailed with pleasure by all who have to go through the drudgery of teaching reading and spelling to beginners.

Milton's spelling is comparatively modern, but not so much so as to be useless for my present purpose. In his "Hymn on the Nativity," I find the following forms: Wherwith, darksom, vers, welcom, approching, quire (choir), toucht, aw, mirtle, sovron, wherin, raign, kist (kissed), stedfast, com, don, weltring, som, agast, dumm (dumb), nimphs, dread, worshipt, jail. I find in "L'Allegro" the following additional spellings: Darknes, washt, slumbring, wher, plowman, sithe, nibling, brest, boosom'd, sed, ern, swet, mattin. We have a great deal of importance attached in our day to etymological spelling, and yet we find Milton spelling, in the clearest violation of etymology, "nimph" and "mirtle." Nor is he even consistent, for while he spells "nimph" in the "Hymn" I find "nymph" in "L'Allegro." I find him also using the forms "saide" in the one poem and "sed" in the other, to suit the exigencies of his rime:

> Such music (as 'tis saide)
> On earth was never made.
>
> —*Hymn.*

> She was pinch't and pull'd she sed;
> And he, by friars lanthorn led.
>
> —*L'Allegro.*

It would be absurd to accuse a scholar of Milton's standing of illiteracy because his spelling is neither strictly etymological nor strictly uniform; why then are modern writers not allowed the same privilege? I leave the opponents of spelling reform to furnish the answer.

Shakespeare's own spelling looks quite antiquated alongside of the modernized text of his plays. I select the following passages as illustrations, for the benefit of those who so persistently plead for the retention of "the English of Shakespeare":

> At this fusty stuffe
> The large Achilles (on his prest bed lolling)
> From his deepe chest, laughes out in lowd applause,
> . . . . . .
> That's done, as neere as the extreamest ends
> Of paralels.
>
> —*Troilus and Cressida, I.* 3.

> You speake your faire pleasure, sweete Queene: faire Prince,
> Here is good broken musicke.
>
> —*Ibid iii.* 1.

> Doe you thinke I will?
> No, but something may be done that we wil not.
>
> —*Ibid iv.* 4.

> Grew like the summer grasse, fastest by night,
> Unseene, yet cressive in his facultie.
>
> —*Henry V.* 1.

Spenser's spelling is very antiquated, and his text abounds in forms more phonetic than their modern representatives. Take, as examples, the following from his sonnets: Hart (heart), blis, ryme, doo, toung, ravisht, wil, colord, flowre, hir, raine (reign), implide (implied), thretning, honor, spred, dride (dried), brest, al, thrugh, moov'd, forst (forced), yeeld, clime (climb), peece, skil, pitty, disobey. Spenser's orthography is extremely irregular; it is not uncommon to find the same word spelt two or three different ways on the same page.

I take the following examples of archaic and phonetic spelling from Ascham's "Scholemaster": Therfore, exceding, delite, som, ment (meant), els, honor, yong, nie (nigh), cumlie, corage, solume (solemn), presens, hed, wherby, feloe (fellow), ar, cum (come), compas, cold (could), beleve, readines, forse, ilnes. Of course Ascham was too much of a scholar to be chargeable with illiteracy because of either odd or inconstant spelling.

Gascoigne, who wrote about the middle of the sixteenth century, spells words as follows: Dwel, welth, sheperds, shuld, al, therin, lieftenants, scepter, don, smel, bin (been), crookt, ment, skil, of (off), plowman, forain (foreign), wil, yong, ful, fel, cal, deckt, comly, evry, faine (feign), threts, grevous, hart (heart), stil.

Lord Surrey, who flourished a little earlier, has the following forms: Fethers, hed, doutfull, hye (high), els, mist (missed), hart, wher, brest, renuer (renewer), ther, fredome, releefe.

In the celebrated ballad of "The Nut-Brown Maid" will be found the following: Ther, furst, gon, greve, beleve, shal, redy, thief, deth, plesure, ful, wher, cum, erl, wurs.

The only other text from which I shall quote is that of "The Vision of Piers Plowman," which belongs to the third quarter of the fourteenth century. In it I find such terms as sesun, brod, dredful, dich, leve, semeth, Heven, plese, giltles, cheef, peple, ese. I may add that in this, and most of the texts older than it, the combination "th" is represented, as every simple sound ought to be, by a single letter, the Anglo-Saxon "thorn," which we have unfortunately lost. If this old letter could be restored it would greatly simplify the spelling of an enormous number of words, including such common ones as "the," "that," and "this." Only those who have looked into our old English texts can appreciate the benefit of such a simplification of spelling.

In view of the above specimens of archaic English spelling I may be permitted to quote, with warmest approval, the following remarks by Dr. Murray, the editor-in-chief of the new "Historical Dictionary," the first part of which has just appeared:

"If you would know to what extent our words have changed during the past two hundred and fifty years, compare the English of the Bible of 1611 with that of the edition now in use. In the first chapter of Genesis you will find 135 spellings which are different from those of the present day—135 differences in thirty-one verses, though the same version, word for word! Yet there are simpletons who, when 'spelling reform' is mentioned, scream hysterically: 'You are going to alter our language! Keep your sacrilegious hands off the language of Milton, Shakespeare, and our English Bibles.'" *

* From Dr. Murray's address on retiring from the Presidency of the English Philological Society.

Promotion Examinations.

COUNTY OF WELLINGTON PROMOTION EXAMINATIONS, MARCH 21st, 1884.

INSTRUCTIONS TO PRESIDING EXAMINERS.

1. Candidates in the same class are to be seated at least five feet (or two desks) apart, and whenever space will admit, no two candidates of any classes are to be seated together. Whispering and copying are to be strictly prohibited, and in every case noted and reported by Examiner.

2. All books are to be taken from seats, and maps from walls. Teachers cannot be permitted to hold the examination at any other time than Friday, 21st March, 1884.

3. Great care should be taken to impress upon the pupils that they should write their names at the top of each page of answers, and after folding the papers in the usual way, and placing them one within the other, the candidate should write on the back his NAME, the CLASS for which he is writing, and the SUBJECT. In case of paper running short both sides may be written upon.

4. The time-table is to be strictly followed.

5. The answer papers of each school are to be "done up" in three parcels (Arithmetic and Dictation in one, Grammar and Composition in another, and Geography and History in a third), and sent per book post (one cent per four ounces) to the proper examiner, as intimated elsewhere ; but the list containing the names of the candidates and the marks assigned for Reading, with the declaration of the examiner, are to be forwarded to your Inspector.

READING.

First Book, Part II., page 54 :—"When by the sun,..... flew off with it."

WRITING.

Copy on slates in script (not printing), page 56 :—"A little bird.....she loved them well."

DICTATION.

Pupils will take separate seats with slates. To be conducted in writing.

1. So far flew the mother away from her brood.
2. I chased a little mouse under a chair.
3. It was a gray-bird's nest, and in it were three brown-and-white eggs.
4. They ate it with zest, for they were hungry.
5. The groom found him and took him home.
6. She whipped him, she slashed him.
7. They had to feed him on milk and the yolk of eggs.
8. A box of pork floated to the place where the men were.
9. To-day they set out for some sport with their kites.
10. Guard me safely through the night.
11. Here you see Florence at her tasks for next day's school.
12. All must hate a lying tongue.
13. He was at all times pleased to lend Curly his ball, or top, or kite.
14. Sixty minutes make an hour.
15. You may be sure Charlie's school-mates felt sorry.

ARITHMETIC.

1. Write in words 678, 1040, 703, 680 and 139.
2. Write in figures five hundred and six, one thousand and ninety, one hundred and seventy ; and in Roman numerals 84 and 999.
3. Find value of $64934+3650-2967+532005-98789+48788$.
4. Tom has one hundred and eighty-six marbles, James has 78, John has 19, William has 37. How many has Tom more than the three other boys ?
5. In a school of nine hundred and nine pupils, there are four hundred and sixty girls ; how many more girls are there than boys ?
6. George bought 28 marbles on Monday, 26 on Tuesday 44, on Wednesday, but on Tuesday he lost 17 and on Wednesday 23 ; how many had he left ?
7. Mary bought a slate for 10c., a book for 25c., a fan for 60c., and a parasol for $1.75 ; how much change should she receive out of a $4 bill ?
8. Find the difference between 786840034 and 982917802.
9. Three numbers added together amount to 2000 ; the first is 387, the second 1107 ; find the third.
10. A stair has 18 steps in it. Now if Willie goes up 13 steps, then down 6, then up 9, then down 5 ; how far is he from the top ?

Value, 100 marks—10 each.

N.B.—The teacher will conduct this examination, and report the results to the Inspector at his first visit to the school.

READING.

PROMOTION TO THIRD CLASS.

Second Book, page 123.—"The Lark and her young ones."
Ten to twelve lines of this lesson.

PROMOTION TO FOURTH CLASS.

Third Book, page 297.—"I know that entertainments..... make our appearance together !"

PROMOTION TO FIFTH CLASS.

Fourth Book, page 137.—"The eagle is seen perched..... his talons from beneath."

Note.—This paper is not to be seen by candidates. Examiners are required to give careful attention to the marking of the reading. Consider expression, fluency, and correct pronunciation. Examiner will fill in the reading marks in list of candidates.

WRITING.

Writing will be judged from Dictation Paper.

SPELLING.

ENTRANCE TO THIRD CLASS.

To be read slowly and distinctly, and the greatest care taken that each pupil understands every word. Each sentence to be first read in full, the pupils simply paying attention, then again slowly, the pupils writing.

1. The tortoise said, "good-bye," and steadily persevered.
2. The violets courtesied in their own curious way.
3. She spied her grandmamma's spectacles and snuff-box.
4. This huge giant, clothed in complete armor, repeated his challenge daily, defying the men of Israel.
5. The boys separated to go on their several errands.
6. It was proposed that they should go to a neighboring carpenter's shop.
7. The saint that wears heaven's brightest crown.
8. The other boys confessed he had more courage than any of them.
9. The farmer loaded his pistol with lead.
10. They were rejoiced to find that their prayers to heaven for aid had been heard.
11. He thought he could spare the crocuses.
12. Searched, tyrant, prudent, surrounded, punishment, prowling, luscious, assistance, failure, wagoner, citizen, liberal.

ARITHMETIC.

ENTRANCE TO THIRD CLASS.

1. Write in words 800014. Write in figures one million six thousand and two. Write in Roman numerals nine hundred and ninety-nine.
2. Divide 708654321 by 6875.
3. Multiply 97008 by 90780, and take 7079034 from the product.

N.B.—No values for questions 1, 2, and 3 unless absolutely correct.

4. A farmer has 729 barrels of apples. After selling 589, losing 87 by decay, and giving away 38 barrels, how many has he left ?
5. If I buy 40 sheep for $300, for how much must I sell them to gain $100 ?
6. How often can 197 be subtracted from one million ?
7. Simplify $604+35\times7-140\div4+3075-76\times43-80$.
8. If a man's wages are $16 a month and his expenses are $8 per month, how much can he save in a year and a half ?
9. When 19 is added to a certain number, 81 is contained in the sum 67 times ; find the number.

10. Jack has five times as many marbles as Harry, and both together have thirty; how many have each?

11. A man bought 920 head of cattle for $21160, and sold them at a loss of $3 each; find the amount he received for the cattle.

12. A farmer sells 36 hogs at $2 each, 24 sheep at $2½ each, 11 cows at $17 each, and 8 horses at $150 each. With the proceeds he buys land at $4 an acre. How many acres did he buy?

GEOGRAPHY.

ENTRANCE TO THIRD CLASS.

1. Draw a map of the County of Wellington, showing its Townships, County Towns, Towns, Incorporated Villages, Railroads, and chief Rivers.
2. Bound the Township of West Luther.
3. What line divides Nichol from Pilkington?
4. What is a Cape? What is a Desert? What is a Sea? What is a Volcano? What is an Island?
5. Name the Cardinal Points of the Compass.
6. Name twenty post offices in the County of Wellington.
7. What county north of Wellington? What counties on the east of Wellington?
8. Name largest township in Wellington. Give the name of the smallest township in the County.
9. I went by rail from Arthur to Drayton; what lines of railway did I pass over?

SPELLING.

ENTRANCE TO FOURTH CLASS.

To be read slowly and distinctly, and the greatest care taken that each pupil understands every word. Each sentence to be first read in full, the pupils simply paying attention, then again slowly, the pupils writing.

1. Fritz's eyes fairly danced.
2. A punctual discharge of the sluicer's duties.
3. He cast a lingering and agonizing look upon the setting sun.
4. As M. Bachand had rightly conjectured, they were fast asleep, and totally unconscious of the devouring element.
5. What a noble resolve was made, and how heroically executed.
6. The crew who felt it their duty to ask, from the Lords Commissioners of the Admiralty.
7. Scorching, crackling, blazing as it was, he went through it for a few short moments of agony.
8. A touch of generosity seemed to come over him.
9. They were all dressed in what is called voyageur costume.
10. To these admirable arrangements must be ascribed the brilliant results which ensued.
11. I reflect with sorrow and astonishment on the little competitions, fractions, and debates of mankind.
12. Correspondent, leisure, eminent, remembrance, fatigue, disguise, penury, ardor, patriotic, frigate, sceptre, pageantry.

ARITHMETIC.

ENTRANCE TO FOURTH CLASS.

1. *A* had a field of 3 acres; he sold it all but 3 roods, in four equal lots. What was the size of each lot?
2. Find the least number which, divided by 675, 1050, and 4368, will leave in each case 32 as a remainder.
3. *A* sold a load of oats at 30 cents a bushel, and with ¾ of the proceeds he bought 16 yards of cloth at 80 cents a yard. How many pounds of oats were there in the load?
4. When 14 oxen cost $539, what is the cost of 96 sheep, if 5 sheep are worth as much as 2 oxen?
5. *A* has only 25-cent pieces. *B* has only 20-cent pieces; how can *A* pay *B* $3.20 for a hat?
6. A man bought two horses and a wagon for $210; he pays for each horse twice as much as he does for the wagon. What does he pay for each horse?
7. Write in figures twenty-three billions, two thousand and four, and in words 100030003.
8. Thirty-three telegraph posts, placed at equal distances, extend a mile; how far apart are the posts?
9. In a certain length of fencing, it is found that whether the posts be put 8, 9, or 10 feet apart, there is always 6 feet over; find the length of fencing.
10. Simplify $\frac{A}{21}$ of $(3\frac{5}{8}-2\frac{1}{6})\div\frac{25}{26}$ and $\{1\frac{1}{12}-\frac{3}{8}+\frac{2}{5}\}\div\{\frac{11}{12}-\frac{3}{8}+\frac{2}{5}\}$.
11. Find the product of ·47 and ·00432; and find the quotient of ·408 by ·0016.
12. *A* owns ⅔ of a farm, *B* ¾ of the remainder, and *C* the rest. *A* has 60 acres more than *C*; how many acres has each?

GEOGRAPHY.

ENTRANCE TO FOURTH CLASS.

1. Define latitude, longitude, meridian, watershed, channel, promontory, beach, and lake.
2. Name the cities of Ontario, rivers of United States, and bays of South America.
3. In what county do you find Collingwood, Goderich, Port Dalhousie, Harriston, Orangeville, Brockville, Lindsay, Cornwall, Petrolia, and Madoc?
4. Name the Provinces of Dominion of Canada with their capitals and chief exports.
5. Name and locate ten of the largest cities in the United States.
6. What and where are Calgary, Chaleur, St. Rogue, Havana, Magdalena, St. Pierre, Port Arthur, Sable, Georgia, Brandon, Hull, Moncton, Severn, Rainy, Soratta, Aspinwall, Vera Cruz, San Juan, Kickinghorse, Burrard?

COMPOSITION.

ENTRANCE TO FOURTH CLASS.

1. Write short descriptions of the following tradesmen and their occupations: (a) A carpenter. (b) A tailor.
2. Write short descriptions of a Township show. A circus. A church tea meeting.
3. Where do you make use of Capital Letters? By what names are these marks known , ; : . ? " "
4. Combine into one sentence: The man was an engineer. He was a steady man. He was a sober man. He drove the fast train. He arrived on time. The snow was deep. The track in places was dangerous.
5. Correct where necessary:

well jack the anxous parrent crys.
how did you manidge jack replys.
i thocht each day it's wants wood hav
and apetite again wood crav.

GRAMMAR.

ENTRANCE TO FOURTH CLASS.

1. Define a Relative Pronoun and a Transitive Verb.
2. Compare *little*, *bad*, *ill*, *friendly*, *rough*, and *much*.
3. What is a simple sentence?
4. What is the subject of a sentence? Give examples.
5. Name the ways in which gender is distinguished.
6. Define a Proper, Common, and Abstract Noun. Give examples.
7. Enlarge the subject in the following sentence in all the ways you can:—"Boys play."
8. Give three instances of a Transitive Verb, and three of an Intransitive Verb.
9. Correct the following sentences, and state, if you can, the rule in each case:—(*a*) Let you and I go for a pailful of water; (*b*) The boys was playing; (*c*) They ran away and hid themselves; (*d*) I have seen him last week.
10. Analyze and parse:—(*a*) They received their new guests as a vastly superior order of beings.
(*b*) Remote from towns he ran his godly race.

CANADIAN HISTORY.

ENTRANCE TO FOURTH CLASS.

1. What is a Treaty? In what year and by what Treaty was Canada formally ceded to the British?
2. Give the date and provisions of the Quebec Act.
3. What gave rise to the United Empire Loyalists? Explain fully.
4. In the Revolutionary War was Canada involved? Explain fully. Give name, provisions, and date of Treaty closing the war.
5. What do you mean by the Constitutional Act and what brought it about?
6. From what is the word Parliament derived? Define Motion, Bill, Act of Parliament, Adjourn, Prorogue, and Dissolve.
7. What led to the war of 1812? Give any important engagement.

SPELLING.

ENTRANCE TO FIFTH CLASS.

To be read slowly and distinctly, and the greatest care taken that each pupil understands every word. Each sentence to be first read in full, the pupils simply paying attention, and then again slowly, the pupils writing.

1. A dull sound of the heavy beast striking against the unyielding trunks of the fallen trees.
2. A sturdy Virginian reaches down and draws up the lad before the tearful, breathless multitude.
3. Another circumstance which occurred about this period afforded him inexpressible delight.
4. Now lulls in dying cadences.
5. The annals of the American war record the following story.
6. The scene is altered from the interesting and beautiful to the majestic and terrific.
7. A peerless moon rode through an occasional cloud.
8. The unwieldy craft are brought to Quebec in great numbers.
9. An uninterrupted communication being thus made practicable across the St. Lawrence.
10. Before he died he paid the victorious army this magnanimous compliment.
11. She seemed to have lost the power of speech, as she sat, gazing in unutterable despair on the mangled form of her husband.
12. Launched, incautiously, fractured, precipice, contemptuous, disease, apathy, hospital, architecture, physician, unmanageable, manœuvre.

ARITHMETIC.

ENTRANCE TO FIFTH CLASS.

1. Find the total cost of 2,360lbs. of hay @ $10 per ton.
   2,352lbs. of flour @ $5 per barrel.
   4,700lbs. of pork @ $24 per barrel.
   1,200lbs. of pease @ 70cts. per bushel.
2. Write down Square Measure, Dry Measure, and Troy Weight. Reduce 238,760 inches to miles, furlongs, etc.
3. A boy gave $\frac{1}{3}$ of his apples to his sister, $\frac{1}{5}$ of what was left to his mother, and had 84 apples left. How many had he at first, and what were they worth at the rate of 3 for 5 cents?
4. Bought a lot 25 rods long and 20 rods wide for $1,000. Sold the same at 25 cents per square foot; find gain.
5. Three boys, Tom, Dick, and Harry, are respectively aged 9, 11, and 12. Divide 416 nuts among them according to age.
6. Simplify $\frac{\frac{1}{5}+2\frac{2}{5}\text{ of }\frac{3}{4}}{5\frac{1}{2}-1\frac{17}{19}} + \frac{11\frac{1}{3}\times 8\frac{1}{6}}{3\frac{2}{5}\times\frac{7}{6}}$.
7. Two-thirds of A's money is equal to three-fourths of B's, and four-fifths of B's is equal to five-sixths of C's. Altogether they have $1,234; how much money has each?
8. Multiply ·3456 by ·1234, and divide the result by 1·92. (N.B.—Must not reduce to Vulgar Fractions.)
9. What must a farmer ask for a horse which cost him $120, so that after throwing off 20% of the price asked, he may still make 25% of what it cost him?
10. How many bricks 9 inches long, $4\frac{1}{2}$ inches wide, and 4 inches thick, will be required for a wall 60 feet long, 17 feet high, and 4 feet thick, allowing that the mortar increases the bulk of each brick one-sixteenth?
11. Define the following:—Factor, Prime Number, Measure, Least Common Multiple. Resolve 87780 and 12350 into prime factors, and from them determine the Greatest Common Measure and the Least Common Multiple of the numbers.
12. How much will $215.75 amount to at 8 per cent. per annum, for three years and a half, simple interest?

GEOGRAPHY.

ENTRANCE TO FIFTH CLASS.

1. Define Pole, Horizon, Meridian, Zone, Channel, Earthquake, Plateau, Delta, Colony, and Tide.
2. Give the Seaports of the Dominion of Canada and Mexico, specifying the principal articles of export from each.
3. Where is Guiana, and what are its divisions? Name its capitals.
4. Where are Mounts Etna, Vesuvius, and Hecla? For what are these mountains noted?
5. Where are the following cities situated, and for what are they severally remarkable:—Genoa, Amsterdam, Marseilles, Orleans, Liverpool, Cork, Odessa, Naples, Glasgow, and Oporto?
6. Draw a map of Nova Scotia, and locate its principal towns, rivers, lakes, capes, and bays.
7. Name and bound the Republics of North America.
8. What and where are:—Wight, Jordan, Indus, Suez, Cairo, Gibraltar, Ceylon, Fraser, Grand, and Bowmanville?

COMPOSITION.

ENTRANCE TO FIFTH CLASS.

1. Write a composition on Christmas day, telling when it is, why it is kept, where you went last Christmas day, who were with you, what you did, and what your opinion is of the value of Christmas day.
2. Correct where necessary the following:—John Steggins and co'y., fergus, respeckfuly informs the publick that they have had 100crate of grocery, 50 chest of teas and an imense stock of dry goods added to his stock from steemship sarmation on wedensday febuary 22nd which i am determined not to be undersold by any in the trade.
   N.B.—i am abel to do this by purchasing for cash only.
3. Write a composition of not less than 25 lines on any of the following subjects:—The Cow. Railway. Kindness. Truth.

GRAMMAR.

ENTRANCE TO FIFTH CLASS.

1. Analyze:—He had exhausted all the resources of his skill; but he still wanted one of those effective dishes, capable of producing a great sensation, which rear on a solid basis the reputation of the cook of a great house.
2. Parse: The ships sailing across the ocean, looked like great ocean birds.
3. Give the plural of *potato*, *brother*, *datum*, *phenomenon*, *beau*, and *cherub*.
4. Correct where necessary, giving clear reasons in each case:—
   (*a*) Thou should love thy neighbor as thou loves thyself.
   (*b*) None of my hands are empty.
   (*c*) Many have profited from good advice.
   (*d*) The number of our days are with thee.
   (*e*) Either the boy or the girl were present.
   (*f*) Which is the heaviest? Her's or Your's?
5. Write sentences containing—
   (*a*) A noun clause.
   (*b*) An infinitive or an infinitive phrase in the subject.
   (*c*) A sentence containing a relative pronoun.
   (*d*) A verb in the passive voice.
6. Give the principal parts of snow, spit, rive, mow, tread, weave.

ENGLISH HISTORY.

ENTRANCE TO FIFTH CLASS.

1. Name the kings of the Norman Period. Give dates when you can, and tell the leading features of the period.
2. Was London always the capital of England, if not what was? What were the Crusades and what King of England became famous in one of them? In whose reign was the title of Prince of Wales given to the eldest son of the King of England?
3. How came Henry IV. of the House of Lancaster to be King of England? Explain fully.
4. What do you mean by the Wars of the Roses? The King-Maker, who was he? At what period were many of the Nobility of England utterly destroyed and Feudalism became extinct? Who was the last of the Plantagenets and by whom was he succeeded?
5. What events of the reign Henry VIII. can you relate, giving dates where you can? In whose reign was Mary Queen of Scots beheaded, The Spanish Armada repulsed, The Church of England reformed, and what great men lived during the same?
6. When were the Crowns of England and Scotland first worn by one Monarch. What was the cause of the Civil War in the time of Charles the First and how did it end? Who was Oliver Cromwell and what was the extent of his authority in England at the close of his life? Give the character of Charles II. and James II. and the reason why Prince William of Orange, his son-in-law,

succeeded the latter. What famous General lived in the reign of Queen Anne and in what battles did he defeat the French?

7. Tell me what you know of the South Sea Company, of the battles of Culloden, Plassy, and of the Plains of Abraham, William Pitt, George Washington, Napoleon, The Duke of Wellington, and Prince Albert.

Practical Department.

TWO TEACHERS.

ESSENTIAL DIFFERENCE IN THEIR QUALITY.

A few days ago we visited a school taught by a young lady who openly acknowledged that she hated teaching and taught simply for the almighty dollar. And yet she boasted that she could teach as good a district school as any Normal graduate; and that her pupils progressed as rapidly in their studies as the pupils of professional teachers. We entered the school-room just as the pupils were coming in from recess; and were kindly received by the young lady in charge. Ten minutes were consumed in quieting the pupils, and during that time we took a general inventory of the room and its occupants. It was naturally a pleasant room, well lighted, neatly plastered, good furniture; and, had the walls been hung with a few pictures to break the monotony of the scene, it would have been as pretty a country school-house as is often seen. But the only attempt at decoration was one solitary, ragged multiplication chart, which had evidently been handed down as an heirloom from preceding generations. In one corner a long bench was piled with a promiscuous mass of hats, caps, overcoats, mittens, and dinner pails; and sticks of wood, pieces of bark, and a few crusts of bread, were scattered around the stove. We were curious to see what intellectual development could take place under such circumstances; so we took out our note-book and noted, or rather took a synopsis of, the proceedings.

The first class called was "A class in geography," consisting of two boys and three girls. A few questions were asked and answered in the usual way, and, though our hearing is generally considered to be acute, we failed to comprehend the answers given. The teacher was evidently troubled in the same way, for she suddenly jumped to her feet and exclaimed: "We want this noise stopped instanter! I'll not hear another lesson till this room is quiet." Comparative quiet reigned; and we were enabled to grasp a few ideas. "James, what is the rain fall of a country?" "Rain that falls." "Johnny, if you don't get your book and make less noise, I'll——Johnny, do you hear what I am saying?" "No, mom." "Get your book." During this colloquy the geography class were variously occupied: one of the girls was studying her spelling lesson, and the two boys were seeing how many times they could sit down on the floor without being detected, and the other two were quietly enjoying the fun. "Eddie, describe the effect of high mountains on ocean winds." "Cools 'em off." (No comment by teacher.) "James, what two principal causes modify the climate of western Europe?" "Scholars, there is too much noise in the room; don't let me see another whisper to-night." Eddie had not yet disposed of the climate of western Europe, but had been engaged in something of vastly more importance to him; and by the skilful manipulation of "Pick or Po" had added several pins to his stock-in-trade. The teacher took it for granted that the question had been answered, and continued the lesson. But, if we should continue the contents of our note-book, it might be recognized, so we'll let this suffice.

But the same farce continued through every recitation. No stated time was given to any class; not a word of explanation was offered; not a kind word spoken during that afternoon. The teacher hated teaching; the pupils hated to go to school; and when there, teacher and pupils worked against each other. One little fellow who was trying hard to study amid the hubbub came to a hard word, and the little hand went up for help; but "no questions now" dampened his ardor, and the hand reluctantly came down. The little fellow twisted uneasily in his seat, and with a disappointed look closed the book and commenced marking on his slate. Inside of three minutes he was ordered to "put up that pencil and study his lesson."

"Intellectual child murder," as *The Moderator* said a few weeks ago, was being committed daily, and those bright young intellects were being dwarfed and stultified and all their finer sensibilities being deadened by a conceited teacher who was no more fit to instruct the dawning intelligence of a child than you or I to build a suspension bridge. And yet I imagine this is not a solitary case. God grant the day may not be distant when teachers cannot enter the school-room without special training for their work.

In contrast to the above is a little experience in southern Wisconsin a few years ago. We were riding along the road about ten o'clock, and came suddenly on a little frame school-house nestled in a small grove. It was not very prepossessing in appearance, and we concluded to see how it looked on the inside. A rap at the door called the ruler of the little place into view. We apologized for the intrusion; explained that we once belonged to the pedagogic ranks, and asked permission to enter. We were cordially welcomed and made to feel at home at once. We heard only two recitations; but they did not interest us as much as numerous other things. On the desk we noticed "Swett's Methods of Teaching" and a copy of the "New England Journal of Education." The walls, though dingy, were decorated with advertising cards tastefully arranged, and a couple of lithographs of the Buckeye mowers and reapers. Over the teacher's desk hung "Wide Awake" and "Fast Asleep," two handsome chromos given, I believe, to subscribers to the *Christian at Work*. On a stand in the corner was a copy of "Zigzag Journeys in Foreign Lands" and two copies of *The Youth's Companion*. Before we left we were asked to read a chapter of "Trapping for Barnum" from its pages. We gladly complied, and it was a pleasure to read to those bright, attentive listeners. The teacher told us she was in the habit of reading to them every day, and often used *The Companion* as a text-book for her advanced class in reading.

The picture of that school-room, and that gentle girl leading those young minds in wisdom's ways, will ever linger a pleasant memory in our mind. We love to think of it, and a prayer goes up from our hearts for God to bless that teacher and those pupils, wherever their lot on earth may be cast. She loved her pupils and her work. Her pupils loved her and their work. They were a happy, loving family. On her register we found only three cases of tardiness, and not a pupil had been absent, unless detained by sickness, during a three months' term.—*Michigan Moderator.*

SCHOOL HYGIENE.

School Hygiene is attracting a good deal of attention in both Europe and America. The Provincial Board of Health of Ontario are not behind in taking it up, and we hope soon to see practical results. It may be regarded as consisting of two parts: one relating to the structure and condition of the school-rooms, the other to the teaching of the subject of hygiene to the pupils. In either there is a broad field, requiring consideration and practical undelayed work. Years ago the late Minister of Education, Mr.

Crooks, promised that he would endeavor to have this important subject taught much more generally in the public schools. We trust and believe that the new Minister will take more decided action in this behalf; and we respectfully urge upon him the importance of giving the earliest possible attention to the subject. In this connection we would suggest the construction of a MODEL SCHOOL-HOUSE in Toronto, say. We should like to see the Education Department, the Provincial Board of Health, and the City School Board, unite in the construction of a public school building on the most approved scientific plan as to lighting, warming, and ventilating, its drainage, plumbing, etc. It would be well to have it comparatively small, in order that it might the more directly serve as a model for school buildings in towns and villages. Such united effort for such an important object would not be impossible nor impracticable. There are several medical practitioners on the Toronto School Board, which of them will bring up the matter for the consideration of the board? The Department or Government might very properly grant a suitable sum to aid in its construction, while the Board of Health, with or without the coöperation of other medical men, and engineers and architects, could see that the whole structure be built and furnished on the most approved hygienic principles.—*The Sanitary Journal.*

COUNSEL TO YOUNG TEACHERS.

Rev. James Owen, in addressing the out-going students of Swansea College recently, gave the following useful and important advice:—

It is your business to call into exercise, and strengthen and improve, the mental faculties of the scholars. "I wonder," said a friend to a president of a college, "you do not weary of going over and over again the same dry and dusty path, the alphabet of mental and moral science." "That," replied the professor, "is because you are not a teacher. The investigator finds his enjoyment in exploring new fields; a teacher in developing new minds." It is said that there are two million acres of waste land in England, and which, if brought under cultivation, would add greatly to the material resources of the Kingdom. But how many acres are there of mental, and moral, and spiritual waste in England? It is your work to reclaim the waste, and to clothe its barrenness with beauty and fruitfulness. John Ruskin says, "There is just this difference between the making of a girl's character and a boy's; you may chisel a boy into shape, as you would a rock, or hammer him into it, if he be of a better kind, as you would a piece of bronze. But you cannot hammer a girl into anything. She grows as a flower does." I am not able to define the reasons for this distinction in Ruskin's mind; but I know that a flower, tended with care, becomes what it is capable of becoming, unfolds its beauty and loads the air with fragrance. So under the training of a conscientious teacher, who sets a right estimate on her work, many a little girl's character will be developed, and will be made strong and beautiful.

Let me urge upon you, then, *the importance of taking your habits of study with you into active life.* There is a danger of resting content with what we have already gained, and of thinking that it is quite enough to carry us comfortably through the world. Boys and girls too often leave the school, and think no more of what they learn there. Young men and women are sent to a college, or to a boarding-school, to "finish their education." There ought to be no such thing as "finishing education," but education ought to go on through life, to its very close. Of course, every one has his own powers and faculties, and he must be content with them. It can do no good to complain, if you have not the sanctified genius of Emma Tatham or of Frances Ridley Havergal. But how few make the best of the powers with which they have been endowed! And all of us have reason to be dissatisfied with our attainments. There was a time when Spain held both sides of the Mediterranean at the Straits of Gibraltar; and she stamped on her coins the two pillars of Hercules (as the promontories of the rock were called) and the inscription *Ne plus ultra*, "No more beyond." But when a brave navigator sailed beyond these rocks, and found a new world of beauty, then Spain struck the word "*Ne*" from the coins, and left *plus ultra*, "More beyond." And you ought to take not *ne plus ultra*, but *plus ultra* for your motto. There is more beyond. Be ambitious to reach it.

Exercise a wise *economy of time.* No one in looking forward to coming years would calmly think of spending them in idleness; but we receive time in moments, and we waste the moments, and thus we gradually waste days, and weeks, and years. I am sure you do not waste time in college; your "time-table" renders it impossible; form a "time-table," and adhere to it, after you leave college.

"*Give attention to reading,*" and so read as to make the book a part of your mental furniture.

There are some books that you can read rapidly; and if you skip them all the loss is not great. But the books that are worth reading are worth reading well. Speaking of Southey's "Peninsular War," Robertson, of Brighton, said, "It is better not to read at all than to run through such a book." And he added, "I have got a small popular book on chemistry, which I am reading now, of 160 pages. I have read little else for a fortnight; but then I could bear an examination on every law and principle it lays down. I read hard, or not at all." This is the proper way to read; read so as to remember, read so as to improve and enrich your mental nature. Make the book you read your own. I do not mean that, if it is a borrowed book, you are to keep it; and some people seem to suppose that the laws of morality do not apply to books and umbrellas. But make what you read your own by impressing it on your mind, by conversation with others upon the subject, by the use of note-books. In the present age of light reading, of reading hastily, thoughtlessly, indiscriminately, unfruitfully, when very many books are forgotten as soon as they are finished, and very much sooner, it is well to lay stress upon this mental discipline. He who would seek goodly pearls must keep his eyes open; and he who would gain knowledge must throw his whole energy into the pursuit.—*Educational Record, London, (Eng.)*

THE PRINCIPAL.

In school-work, as everywhere in life, success depends on the proper organization of forces and wisdom in utilizing agencies. "The right man in the right place makes all things right; while the best man may be so misused as to become a positive obstruction." In nothing is the unwisdom of our graded school system more displayed than in the mistakes perpetually made concerning the principal. In one school his teaching power is wholly dispensed with, and he is let loose for the sole work of what is called supervision. There are schools, especially in communities where the graded system is a novelty and trained teachers are not easily obtained, in which it is necessary that the principal of a great building, for a time, should be wholly occupied in the supervision of instruction and discipline; spending a portion of each day in every room until the local teacher is able to handle her work effectively. But even this imperative duty requires wisdom and tact, or it will be marred by over-doing. The moment that fifty

children are convinced that their own teacher is, in any way, incompetent is the moment of defeat; for through that gap, as through a crevasse in a Mississippi levee, the flood of disorder pours in and drowns the land. As soon as possible, the principal should leave the room-teacher with full reponsibility, or should coöperate in that friendly and stimulating way which will not undermine her influence with her pupils.

And, as soon as possible, the principal, man or woman, should have fixed periods of instruction with the higher classes of the school. Every bright child will be gratified by the compliment of being enrolled in the principal's class, and many a dull or mediocre scholar will do better work with the hope of reaching it. The last absurdity is reached when a famous teacher is placed over several hundred children and a dozen assistants to be relieved entirely from the work that has made him famous; too often, compelled to waste his energies in school book-keeping and matters of detail. All work of this kind should be reduced as much as possible in quantity, and either distributed among the entire corps or assigned to a principal's clerk; leaving the superior teacher and ruler of the house in a condition to do the best possible work in the organization, instruction, and discipline of the establishment.

On the other hand, a most destructive mistake is often made by shutting the principal entirely in the highest room, leaving no time for supervision, or even for the observation of what is going on below. Anybody can see how helpless the principal must be in this position; compelled to deal with material that has passed through a succession of rooms over which he has no control,—ignorant, in fact, of what is being done in any of them. The attempt to instruct such a class is a perpetual struggle with insurmountable difficulties, which, sooner or later, exhausts the patience and destroys the efficiency of the finest teacher. In too many of our smaller cities and in some of our chief towns this arrangement is made with a purpose. The assistant teachers are thrust in as a matter of favoritism, and, of course, resent supervision and work with a single eye to please their own trustee; the principal, often a woman, being engrossed by the same degrading occupation. The general superintendent is sometimes a weak man, kept in place by ambitious trustees on account of his weakness, that he may not interfere with the plans of ambitious members of the board; or a "Boss" who aspires to the management of every room and the personal supervision of every teacher. While this may be done in a place of moderate size, the attempt to handle the schools of a city even of 20,000 people in this way is a mistake which becomes more apparent with the increase of population.

Supervision is the backbone of every system of public schools. But no superintendent or principal can teach school over the head of the room-teacher. Neither can the room-teacher be wisely indulged in an "independence" that isolates her pupils and breaks up the harmony of the school-family. Here, as everywhere, we want "the golden mean."—*N. E. Journal of Education.*

A curious instance of what a simple change of comma can produce has been noticed of late. It runs as follows: Lord Palmerston then entered on his head, a white hat upon his feet, large but well-polished boots upon his brow, a dark cloud in his hand, his faithful walking-stick in his eye, a menacing glare saying nothing.

Boston's new sewerage system has been carried on under the able management of one of Boston's efficient engineers, Mr. Elliot C. Clarke, a son of Rev. James Freeman Clarke. The idea of the new system is that of intercepting the sewage of the city, and by a large tunnel carrying it under Dorchester bay to Moon island, where it is received in reservoirs and held until the ebbing tide will carry it far out to sea.

Notes and News.

THE CANADA SCHOOL JOURNAL.—In the March number of the SCHOOL JOURNAL there are editorial articles on the Report of the Minister of Education and the Reports of the High School Inspectors and Moral Education. There is a large and varied selection of subjects bearing directly on the work of education, which teachers will find both interesting and profitable. In addition to the usual technical papers, Notes and News, an attractive feature will be found in "Readings and Recitations." The SCHOOL JOURNAL is a valuable aid to the teaching profession.—*Canada Presbyterian, March 26, 1884.*

The daily attendance at the Williamstown High School is about fifty, and the progress under the efficient head master, T. Scales, B.A., is very favorably mentioned in the local press.

We are glad to note that J. A. Clarke, M.A., B.Sc., late head master, Smith's Falls High School, is now convalescent. His medical advisers, however, prohibit his return to active duty in teaching for some time.

The Ingersoll Board of Education recently inspected the writing in the highest eight departments, and passed a resolution complimenting the principal, J. S. Deacon, on the marked success which has attended his efforts to improve the scholars in this important branch of study.

The Ingersoll Board of Education at its February meeting raised Mr. J. S. Deacon's salary to $900. He has been principal of the school (P. S. and M. S.) 11 years.

Ingersoll Model School passed 44 pupils at the two H. S. Entrance Examinations for 1883.

The Barrie *Gazette* says that all the members of the Board of Education in that town "express themselves well pleased with the persevering industry of the head master; the accuracy and promptitude of the monthly reports of the schools are a great improvement." The head master referred to is Mr. T. O. Steele, late Principal of the Perth Public School.—*Perth Courier.*

At the last session of the Milton Model School there were 18 students in training, only two of whom were unsuccessful at the final examination. All the staff are re-engaged except Miss Bastedo, who was employed during the Model Session, and received $90 for Model School work. The present teachers are,—Mr. H. Gray, head master, Mr. A. Crewson, and Misses Jarvis, Pattinson, and Andrews.

At the Convention of the Dominion Alliance recently held in Toronto, the following was one of the resolutions adopted:—That the convention hails with delight the efforts being made for the introduction of temperance text-books into our public schools, as thereby the youth of our country will be better instructed as to the nature and effect upon the human constitution of alcoholic liquors, and better qualified for the discharge of their duties as citizens of Canada; and that a copy of this resolution be forwarded to the Minister of Education desiring that gentleman and the Board of Education to introduce such a book into the public schools at as early a date as possible.

Cornelius Donovan, M.A., head master of the Separate Schools, Hamilton, has been appointed Inspector of Separate Schools for the Province, to act in conjunction with Inspector J. White, whose sphere was too extended and duties too arduous for effective work, including as it did the whole of Ontario.

The report of School Inspector Hughes for March gives the registered attendance at the Public Schools of Toronto at 12,271, the average attendance at 10,979, the percentage of average at 89.5, and the cases of lateness at 1,107. There were cases of corporal punishment at the schools as follows:—Dufferin, 12; Wellesley, 16; Ryerson, 8; Phœbe, 32; John street, 12; the Park School, 38; Victoria street, 7; Niagara, 24; Parliament, 7; George, 16; Church, 20; Elizabeth, 18; Brant, 14; Bathurst, 30; Hope, 22; Palace, 10; York, 14; Borden, 14; Givens, 12; Girl's Home, 8; Orphans' Home, 4; Chestnut, 4; Jesse Ketchum, 27; Cottingham, 4; Rose Avenue, 7. Seventy-four teachers were late an aggregate of 214 times, and at 19 schools the drill instructor was late 19 times.

Previous to the departure of Mr. D. J. Goggin from Port Hope to his new sphere of labor as principal of the Normal School in Winnipeg, the Board of School Trustees, teachers, and pupils united in showing their respect for him and appreciation of his

valuable services during the eleven years he had spent among them as Head Master of the Model School. The meeting in the Town Hall was crowded. Mayor Hugel occupied the chair, with Mr. Goggin on his left, while seated around on the platform were Messrs. G. M. Furby, James Evans, W. Craig, Sr., D. Chisholm, W. Thornhill, T. M. Henry, W. B. Stott, Drs. Clemesha and Purslow, Major Guernsey, and Rev. Messrs. F. A. O'Meara, D.D., Jas. Cleland, John Learoyd, and Geo. A. Copeland.

On a table in front of the chairman were a silver tea-set from the teachers and pupils of the public schools, and pupils of the high school, who received their primary education under the superintendence of Mr. Goggin, and a silver urn from the public school trustees. The presents were purchased from Mr. A. W. Pringle. The tea-set consisted of a waiter, tea and coffee pots, and sugar, cream, and slop bowls, worth in all $150, while the urn was valued at $39.

After a few complimentary remarks from his Worship, Mr. Thornhill read an address from the teachers and pupils expressive of the high respect and esteem in which Mr. Goggin was held by them, and their deep and heartfelt sorrow at his departure. He (Mr. Thornhill) begged Mr. Goggin's acceptance of the memento which would tend to maintain his recollection of their affectionate regard for himself and his family. The address was signed by representatives of the Central, West Primary, East Primary, and High Schools.

On the part of the trustees Mr. Furby, chairman of the board, after a speech in which he reviewed the history of the schools and the indefatigable labor of Mr. Goggin in advancing them to their present condition of noted efficiency, presented Mr. Goggin with the silver urn, on behalf of himself and colleagues. Mr. Goggin's reply to both addresses was full of deep feeling, impressive eloquence, and cordial thanks. Dr. Purslow, Dr. Clemesha, Dr. O'Meara, Rev. J. Learoyd, and Mr. W. Craig, Sr., bore testimony to the excellent work done in educational matters by Mr. Goggin for the benefit of the town, and while a general tone of deep regret rang through their addresses there was a decided expression of opinion that the authorities in Winnipeg had exercised the greatest wisdom in their selection of Mr. Goggin for the high and onerous position he was about to fill. The singing of "Auld Lang Syne" brought the proceedings to a close.

Since the appointment of Mr. John Noble to the principalship of Uxbridge public schools, progress has been going on steadily and well. Among several new arrangements conducive to the welfare of the school, we may mention the establishment of a school fund to provide pure literature for the scholars, and a weekly meeting of the teachers to discuss topics bearing on their work in the school. We need not dwell on the obvious importance of both these points. Mr. Noble is ably assisted by the Misses Jackson, Walsh, Boden, Bustin, and Nicholls.

The action of the Board of Education in appointing Mr. T. J. Campbell, B.A., to the mathematical mastership of the Whitby Collegiate Institute will doubtless prove a happy one. Mr. Campbell is a gentleman of singular ability and attainments as a mathematician. He has each year of his University course taken a scholarship, and at his graduation last year won the gold medal in mathematics, and from his very high standing was appointed a Fellow of the University, in which capacity he has since acted as assistant to Prof. Loudon in lectures at University College. Mr. Campbell has a first-class grade A Provincial Certificate, and has had three years' experience in teaching. *Per Aspera Ad Alta* is the motto of the Collegiate Institute. May it prove true in this instance.—*Whitby Chronicle.*

A very successful Promotion Examination was held in Wellington County on the 21st of March. In Inspector Clapp's division it is reported seven hundred and seventy-five candidates applied to be examined. The work of reading the answers of the candidates was performed by committees. No teacher presided in his own school, and the papers were sent into the adjoining township to be examined. We understand the reports are all in, and the names of the successful pupils have appeared in the county papers.

The teachers of the first and second divisions of Wellington county, including the city of Guelph, intend holding a Teachers' Institute at Fergus on Wednesday, Thursday, and Friday, the 28th, 29th, and 30th of May. Prof. E. V. DeGraff, of Washington, D. C., has been engaged, and the Hon. the Minister of Education will occupy the afternoon of Wednesday in addressing the school trustees and teachers on proposed amendments to the School Law. The Minister also lectures in the evening. Principal Grant lectures on Thursday evening. It is expected that Mrs. M. Hunt of Boston will address the Institute on "Compulsory Temperance Instruction in Public Schools." Papers are promised by Hon. Charles Clarke, M.P.P., Principal Mills, Inspector Carson of Middlesex, and by other prominent educationalists.

Strathroy High School has in attendance over 200 pupils. Under the able management of Mr. Wetherall it has been very prosperous. Applications are now being made to have it erected to a Collegiate Institute.

The *Canada School Journal* suggests as a topic for consideration at coming teachers' conventions, "What means should be taken to suppress the publication of pernicious literature among our youth?" The *Journal* cites numerous proofs of the terrible effects of such stories as "Buffalo Bill," "Jesse James," and the like, upon the minds of children, and mentions that in Montreal a boy committed a forgery, in Toronto a lad shot his companion on the street, and in each case the cause was too much dime-novel reading. Insubordination and impertinence are becoming unpleasantly prevalent in the schools—especially in the city public schools—and any remonstrance by the teacher is most violently resented both by parent and scholar.—*Toronto Mail.*

Dr. Haanel, of Victoria College, Cobourg, has made a discovery which is destined to revolutionize the methods of blow-pipe analysis. Hydriodic acid is the re-agent which Dr. Haanel purposes to use. Plaster of Paris tablets are used instead of charcoal. The advantage of the change is obvious. The specimen is placed in a little hollow at the end of the plaster of Paris tablet, and a drop or two of hydriodic acid is added; the specimen is then heated in the blow-pipe flame, and the properties of the mineral are indicated by the colour of the flame. Dr. Haanel's discovery has been sent out to the world in a most creditable way—a series of magnificent lithographs accompanying the explanations.—*Toronto Mail.*

The *Canada Educational Monthly* is not in love with the system of a Minister of Education, but sees a peculiar danger in the elevation of Mr. G. W. Ross to the position of Minister of Education for Ontario. Our contemporary says: "But whether party politics be allowed to obscure his vision and warp his judgment, the result of his elevation to office will be that every aspiring teacher and inspector, with Mr. Ross' shining example before him, will become a furious politician. He will not fail to see in his School Register a Minister's Portfolio."—*Hamilton Spectator.*

At the annual meeting of the Institute of Chartered Accountants of Ontario, held in Toronto on March 7th, Alderman J. W. Johnson, of Belleville, one of the principals of the Ontario Business College, was re-elected a member of the Council. Mayor Mason, of Hamilton, is the new President, succeeding Mr. S. B. Harman, Treasurer of Toronto.

Mr. W. C. Campbell, of Bartonville (East Hamilton), has been appointed assistant master in the Welland High School. Mr. Campbell takes classics, English, mathematics, drawing, and penmanship.

The Philadelphia School of Oratory will hold its summer session at Grimsby Camp grounds this year. The date of the holding of the school is from the 7th of July to the 15th of August. Besides the school there will be lectures by Douglass, Talmage, Fowler, and Thomas.—*Toronto Mail.*

LL.D.'S IN FRANCE.—The authorities of the leading colleges and universities in the United States have made praiseworthy efforts, during the past few years, to give significance to their degrees. The practice of conferring honorary degrees has declined, and examinations have been required for degrees in course. The necessity for such action is apparently not confined to the United States. According to the *Revue Internationale de l'Enseignement* for January, 1882, the French faculties of law did not create any doctors of laws in 1804-5. In 1806 they created 12; in 1820, 16; in 1830, 21; in 1840, 53; in 1850, 59; in 1860, 58; in 1870, 108; in 1872, 131; in 1875, 191; in 1876, 189; in 1877, 174; in 1878, 175; in 1879, 178; in 1880, 175. This rapid increase has excited some suspicion, and the French Government has interposed a check. Henceforth the examination for the LL.D. degree will be more vigorous. The candidate must first be a licentiate of law, and then submit to three examinations before a State Commission; viz., (1) on Roman law; (2) on French civil law and the history of French law; (3) on constitutional law.—*Education.*

[NOTE.—We recommend these remarks to the attention of the Senate of Toronto University. Evolution is better than special creation in the matter of university degrees, and we hope the Senate will refrain from making any use of the power to confer honorary degrees.]

NOVA SCOTIA.

The Legislature at its late session revised and consolidated the various Acts relating to Public Instruction. The provision of the law which empowered the Council of Public Instruction, under certain conditions, to sanction separate schools for colored children led to animated debates in both branches of the Legislature. A proposal to entirely eliminate this particular section was defeated, —in the House of Assembly by a majority of *two*, and in the Legislative Council by a majority of *one*. The latter body, however, added an important rider to the effect that no colored child can be compelled to attend school outside of the ward in which his parents or guardians reside. After a spirited discussion the House of Assembly ratified this amendment by a large majority.

The report of the Education Committee of the House of Assembly as published in the local *Journal of Education* is quite a lengthy document. It expresses general approval of the text-book policy of the Council of Public Instruction, and contains some excellent suggestions on that and other subjects.

Mr. Robichan, M.P.P., brought before the Legislature in a very interesting speech the educational claims of his countrymen, the Acadian French population of Nova Scotia. His aim was to show that the retention of their own language was essential to the true progress of that people, and that therefore our educational system should make fuller provision both for imparting instruction in French and the special training of French teachers. He supported his contention by pertinent statistics which exhibited much research, and evidently produced considerable impression on the Legislature.

F. C. Sumerhast, Esq., formerly registrar of the University of Halifax, has assumed the proprietorship and principalship of the Ladies' Boarding School, hitherto known as "St. Margaret's Hall." Mr. S., who is well known to many readers of the JOURNAL and was for some time Professor of Modern Languages in King's College, has given his institution the name of "Girton Hall."

The Academy at Annapolis has been making excellent progress since the appointment, about a year ago, of Mr. A. McRae to the principalship. Mr. McRae was formerly head master of Digby Academy, where he succeeded in making a very worthy record. The school commissioners have secured a larger school building with a magnificent play-ground, and a decided improvement is visible in every feature connected with the school. Mr. McRae takes the high school work, Mr. Ruggles is second master, and the junior departments are ably conducted by the Misses Clarke, Longley, and Harris.

The attendance at Windsor Academy is nearly 500. The principal, Mr. H. C. Elliott, is an earnest and zealous teacher, and the work now being done will reflect credit upon him. He is efficiently assisted by Misses Faulkner, Haliburton, Bennett, McKeen, Worthylake, Calder, and De Wolfe.

In looking over the prospectus of the new High School in Ridgetown, we conclude the school officials made an excellent selection when they decided to give the management of their school to Geo. A. Chase, Esq., M.A., Medallist in Modern Languages of Toronto University. Although the school is but in its infancy, having been in operation only since last September, there are already ninety pupils in attendance, a third master is employed, and further assistance is required. "It is good to begin well," and the foundation laid seems to be all that is desired, while the trustees are determined to spare no efforts in placing their school among the very foremost in the Province. We wish them every possible success.

GENERAL.

IN HIS PLACE.—Here is something teachers should apply to themselves. Do they ever talk above the comprehension of the pupil? A half-witted fellow found a missing horse, when all search for him had failed, and a liberal reward had been offered for his recovery. On his bringing the horse back to the owner, he was asked "Why Sam, how did you come to find the horse when no one else could?" "Well, I just 'quired where the horse was seen last, and I went thar, and sat on a rock; an' I just axed myself if I was a horse, whar would I go, and what would I do? And then I went and found him." It would be well if every teacher before sitting down to a class of children would ask himself, "If I were a boy how would I feel and what would I want?" He would thus be more likely to get hold of those boys and bring them along with him wherever he pleases to go.—*Barnes' Educational Monthly.*

I would not like to send a child to a school where there was no *library*. Intelligent teaching requires a demand for intelligence. *Intelligence* means becoming a part of the life that has throbbed and struggled through the pulses of the ages, of the people who have lived and toiled and died in this world—in a word, of *History.—Kennedy.*

Expect results from every recitation of every class. Set out with clear aim at a definite mark. Keep the gun of the recitation steadily levelled at the proposed game. If the first shot doesn't bring it, contrive by all that is human that the last shot shall. If the time is up, and no game is bagged, you will not be the first hunter who has returned empty from a long chase. But the point is that you should distinctly know that there was some game in the bush, that you pursued it faithfully and hotly. That you make no capture is only a surety that it is there for you yet, and that at the next chase you must set your traps more skilfully, keep the trail more surely. An interested teacher at every recitation may fire with the zeal of the hunter and enjoy the chase quite as much. But it is good to come home with something. —*Normal Exponent.*

FORM AND SPIRIT.—Admitting all the advantages that Colonel Parker had in being permitted to carry out his ideas on the subject of teaching, there is no doubt that the success was not the mere success of method, but that true earnest spirit of the teacher which was behind the method. There was nothing strange or startling told us by Colonel Parker, little that was altogether new, and we heard teachers express surprise and bewilderment that this far-famed system should prove to be a thing apparently so simple. These were teachers who had not yet learned to distinguish between the form and the spirit. That a good method is a grand thing in the school-room or elsewhere, and that there are good modes and bad modes of teaching, we do not deny. Still the fact remains that it is the spirit which animates the form, and not the form which animates the spirit.—*N. Y. School Journal.*

Life is made up, not of great sacrifices or duties, but of little things, in which smiles and kindness, and small obligations, given habitually, are what win and preserve the heart and secure comfort.

The main purpose of education is not to promote success in life, but to raise the standard of life itself; and this object can be obtained only by those higher studies which call forth the powers of reason, moral feeling, and artistic taste. Even in professional education, our aim ought rather to be usefulness in life than mere success, and we have great distrust of all theories of education that put success in the first place.—*Century.*

COMMENDATION, NOT CRITICISM.—Did you ever notice how the apostle Paul told all the good he knew about the people whom he wished to rebuke before he reminded them of their defects? "Nevertheless, brethren, I have somewhat against you." If you are going into the scolding business at all, take Paul's plan. Instead of heaping indiscriminate blame upon your child, tell him in what he is pleasing you, and then very tenderly suggest the points where improvement is desirable.—*Richmond (Va.) Rel. Herald.*

"Ah, I have an impression!" exclaimed Dr. McCosh, president of Princeton College, to the mental philosophy class. "Now, young gentlemen," continued the doctor, as he touched his head with his fore-finger, "can you tell me what an impression is?"

No answer.

"What! no one knows? No one can tell me what an impression is?" looking up and down the class.

"I know," said Mr. Arthur, "an impression is a dent in a soft place."

"Young gentlemen," said the doctor, removing his hand from his forehead and growing red in the face, "you are excused for the day."

Meantime the school must continue to fight the saloon. It has its own weapons of defence, not only in its own behalf, but in behalf of the nation and of society. Just so far as the boys of the nation appreciate what an impeachment of true manhood it is for one to "put the cup" to his own or "to his neighbor's lips," and so far as it gets instilled into them that the truest token of *a man* is the self-control that repels every sort of mere indulgence—so far the school-house is doing triumphant battle for the right.—*Chicago Standard.*

To the best and wisest, while they live the world is continually a froward opposite; and a curious observance of their defects and imperfections; their virtues afterwards it as much admireth. And for this cause, many times that which deserveth admiration would hardly be able to find favor, if they which propose it were not content to profess themselves scholars and followers of the ancients. For the world will not endure to hear that we are wiser than any have been which went before.—*Richard Hooker.*

Books, like friends, should be few and well chosen.

Fear to do base, unworthy things is valor.—*Ben. Jonson.*

Worth begets in base minds envy, in great souls emulation.

To read without reflecting is like eating without digestion.

The usual fortune of complaint is to excite contempt rather than pity.

A taste for good reading will take us into the best possible company.

The less a man thinks or knows about his virtues the better we like him.

Would you have fame? Write your name in deeds of kindness, love, and mercy on the hearts you come in contact with.

The bright days of youth are the seed time of life. Every action is a seed whose good or evil fruit will be the happiness or misery of after life.

Be good, my child, and let who will be clever;
Do noble deeds, not dream them all day long;
And so make life, death, and that vast forever
One grand, sweet song.—*Chas. Kingsley.*

ONTARIO TEACHERS' ASSOCIATION.

PROGRAMME OF SUBJECTS.

The twenty-fourth Annual Convention of the Ontario Teachers Association will be held in Toronto, on Tuesday, Wednesday, and Thursday, August 12th, 13th, and 14th. The following is the programme as it now stands arranged:—

GENERAL ASSOCIATION.

Uniformity of Text-Books, Mr. William Carlyle, Woodstock; Increased Legislative Aid to Public Schools, Mr. Wm. Macintosh, Madoc; How Best to Secure the Permanence and Increase the Efficiency of the County Model Schools, Mr. G. W. Johnston, Hamilton; Status and Value of Third-Class Certificates, Mr. F. H. Mitchell, Perth; University Consolidation and Legislative Aid to Colleges, Mr. A. P. Knight, Kingston; Industrial Education, Mr. James L. Hughes, Toronto. Addresses will be delivered by the Hon. G. W. Ross, Minister of Education, Dr. Geo. M. Grant, of Kingston, and Col. F. W. Parker, of Illinois.

PUBLIC SCHOOL SECTION.

Our Profession from an experience of thirty-two years, Mr. James Duncan, Windsor; The Superannuation Fund, Mr. John Campbell, Toronto; A Plea for Reading and Writing in Our Schools, Mr. F. C. Powell, Kincardine; Advancing Certificates from Grade to Grade on Experience, Mr. R. Alexander, Galt.

PUBLIC SCHOOL INSPECTORS' SECTION.

Amendments to the School Law, Messrs. D. J. McKinnon, Brampton, and Robert Little, Aeton; How may an Inspector be of most service to his Inspectorate, Mr. Wm. Macintosh, Madoc; The Public School Programme, Mr. A. Campbell, Kincardine; Advisability of extending the time for which Third-Class Certificates are Valid, F. L. Michell, Perth.

HIGH SCHOOL SECTION.

A Commercial Department in High Schools and Collegiate Institutes, Mr. J. E. Bryant, Galt; Matriculation Examination of Toronto University, Mr. H. I. Strang, Goderich; The Equalization of the Work in High School Options for Second and Third-Class Certificates, Mr. J. A. Clarke, Smith's Falls; Report of Committee on "Subjects in Natural Science for Matriculation," Messrs. J. E. Bryant, J. Turnbull, and D. C. McHenry.

Readings and Recitations.

DON'T BE MEAN, BOYS.

FOR DECLAMATION.

Sometimes I wonder what a mean man thinks about when he goes to bed. When he turns out the light and lies down alone he is then compelled to be honest with himself. Not a bright thought, not a generous impulse, not a word of blessing, not a grateful look comes back to him; not a penny dropped into the palm of poverty, nor the balm of a loving word dropped into an aching heart; no sunbeam of encouragement cast upon a struggling life; no strong right hand of fellowship reached out to help some fallen man to his feet—when none of these things come to him as the "God bless you" of the departed day, how he must hate himself—how he must try to roll away from himself and sleep on the other side of the bed—when the only victory he can think of is some mean victory, in which he has wronged a neighbor. No wonder he always sneers when he tries to smile. How pure and fair and good all the rest of the world must look to him, and how careless and dreary must his own path appear! Why, even one isolated act of meanness is enough to scatter cracker crumbs in the bed of the average man, and what must be the feelings of a man whose whole life is given up to mean acts? When there is so much suffering and heartache and misery in the world, anyhow, why should anyone add a pound of wickedness or sadness to the general burden? Don't be mean, boys. Suffer injustice a thousand times rather than commit it once.—*Burdette.*

THE OLD SCHOOL-HOUSE.

I wandered alone down yonder lane,
Where once "with the boys" I ran in play,
But to-day I leaned heavily on my cane,
And noticed each change with a sense of pain.
By the road-side the grass was not worn away;
Undisturbed, all in place, on the wall lay each stone,
While ferns and flowers grew rank in the wood,
And the now vacant plot to tall grass was grown,
In the place where the old school-house stood.

I seated myself on that large corner-stone
Of the level field, the one on the right:
And I thought of the boys to manhood grown,
Who had played with me there ere care was known,
Ere our trust in the world took its flight;
A few grey-haired men came to my mind,
Who stood like myself as old trees in a wood,
Who might wander as I, some day to find
The place where the old school-house stood.

We, who played round this now lone plot,
Have since played in life a far different game;
But down in our hearts we ne'er once forgot
The scenes that cluster around this spot,
'Mid all life's changes they seem the same.
Many who played here have long been at rest,
Some going while earth seemed yet to them good;
In my musing, I, young with the rest,
As I sat where the old school-house stood.

I thought of the teachers who had tried to make
Our careless boys into wise, useful men,
O, the trouble, I remembered, that some did take
A love for the right in our young minds to wake,
Thinking that love would ne'er leave us again;
They have met, some of us, in that home above,
Where this puzzling life is all understood,
And I thought of them all with a reverent love
As I sat where the old school-house stood.

All took different paths when we parted here,
Alas, some of us were never again to meet;
Some paths proved short—the end so near,
And some so pleasant, and some so drear.
Each had strange mingling of bitter and sweet;
Then I heard a sound, it was like a wail,
And it waved the grass like a mourner's veil,
O'er the place where the old school-house stood.

THE MOTTO TO WEAR.

The proudest motto for the young;
Write it in lines of gold
Upon thy heart, and in thy mind
The stirring words unfold;
And in misfortune's deary hour,
Or fortune's prosperous gale,
'Twill have a holy, cheering power,
"There's no such word as fail."

THE TRIPLE PLEDGE.

We will not buy, we will not make,
We will not use, we will not take,
Wine, cider, beer, rum, whiskey, gin,
Because they lead mankind to sin.

We will not smoke the smoker's pets,
Those little things called cigarettes.
We will not chew, we will not snuff,
Or waste our time in playing puff.

We will not curse, though many dare
Open their lips to curse and swear.
Our words shall be both pure and plain;
We will not take God's name in vain.

DO RIGHT.

Do right is our motto, do right is our aim,
We care not for glory, for wealth, or for fame;
A pure spotless banner we'll rise with our might,
With this for our motto,
"ALWAYS DO RIGHT."

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

EAST VICTORIA.—The thirteenth half-yearly Convention of the East Victoria Teachers' Association will be held in the Town Hall, Lindsay, commencing on Friday, May 16, 1884. On Friday afternoon the Minister of Education will meet School Trustees, Municipal Officers, and other persons interested in education, when the following subjects will be discussed:—1. The present mode of distributing the High School Grant. 2. The propriety of requiring County Councils to aid in the support of High Schools in towns separated from counties. 3. The renewal of Third-Class Certificates and the granting of Permits. 4. The propriety of conducting Third-Class Examinations by County Boards, as formerly. 5. The Superannuation of Teachers. 6. General amendments in the School Act. The Friday morning and Saturday morning sessions will be held at the Union School; the Friday afternoon session in the Town Council Chamber; and the evening lecture in the Opera House, when the chair will be taken by Wm. Grace, Esq., Chairman of the Board of Education.

WEST HURON.—The semi-annual meeting of the West Huron Teachers' Institute will be held in the school-house, village of Exeter, on Thursday and Friday, 8th and 9th of May, commencing each day at nine o'clock. Professor Chapman, of Hamilton, has been secured to give a number of choice Readings on Thursday evening.

HALTON.—The Halton County semi-annual Teachers' Convention assembled in the school building here on March 6th. About fifty teachers were present. The first session was devoted to preliminary work, such as appointing committees, &c. The afternoon session was devoted to papers on moral ethics and an address from Mr. McKinnon, P. S. I. of Peel County. In the evening a brilliant lecture was delivered in the town hall by the Rev. Mr. Laidlaw, of Hamilton; subject,—"Our Forefathers." The reverend gentleman proved from words found in Hindoo sacred books that we and the Hindoo people were originally of the one race, occupying the Aryan plain in Central Asia. The morning session was devoted to papers on moral ethics, there was also an address by the Rev. G. Robertson on "The Successful Student." In the afternoon the Rev. G. W. Wallace addressed the Convention and a discussion took place on General Superintendent vs. a Minister of Education. A vote of the Convention was taken and a large majority voted in favor of a Minister of Education. At the evening meeting, in the town hall, the Rev. J. Lancley delivered his great lecture entitled "One Another." The reverend gentleman combined deep and original thought with quaint humor. He showed clearly how dependent people were on one another for their happiness, also that it was essential for the good of the race that some should become rich so that we might have our railways, telegraphs, etc., which the poorest can enjoy for a small outlay. That all the rich man's millions represent is at our disposal for a few cents. The Convention adjourned to meet at Acton next midsummer.

REVIEWS.

CAEDMON'S EXODUS AND DANIEL, edited from Grein, by Theodore W. Hunt, Ph.D. *Boston: Ginn, Heath & Company.*

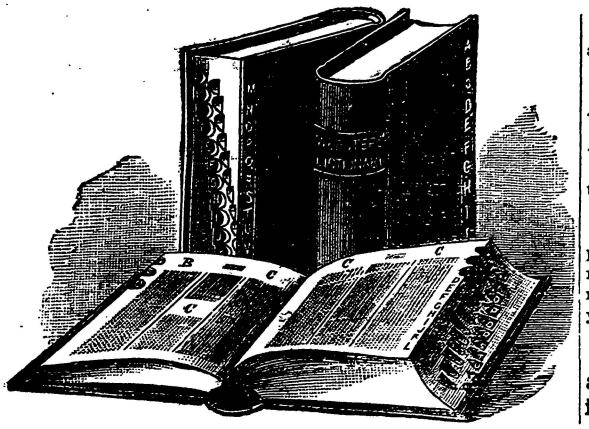
This neat little volume, 120 pp., is No. II. of the *Library of Anglo-Saxon Poetry* by Ginn, Heath & Co. It contains a general and a special Introduction, copious notes, and a full glossary of words—in fact all the help that could be desired. The same publishers offer a Translation by Garnett, and an Anglo-Saxon Grammar and Reader, so that at a very small cost every student may provide himself with a complete apparatus for prosecuting Early English. The publishers deserve the thanks of studentdom for placing within easy reach, and in a most attractive form, these works, which have hitherto received very little attention amongst us. It is now getting to be generally acknowledged that early monuments of our language are quite as worthy of attention as any books we can read. The English Homer is as important to us as the Greek Homer, and the discipline obtained has the additional advantages of bringing us into close contact with the thought and feeling of our own ancestors, and of enabling us to understand thoroughly the language we have derived from them. We strongly recommend every teacher of English to make a beginning with these books. As a special study, perhaps no other course of reading will be more fertile in useful results. It is in the direct line of present progress, and the day is not far distant when those who have diligently followed up such a course will find an active demand for the skill thus acquired. To those who have not been able to devote time to Latin and Greek, such a course offers special inducements, and will amply repay all who have the enterprise to make a good beginning with the attractive little volumes here noticed.

MAGAZINES.

Whether the decline of the shipping interest of the United States has been due to a protective tariff or other causes is a question, the discussion of which cannot fail to attract all who take an active interest in politics. The subject is ably treated in the *North American Review*, for April, by Mr. Dingley, a member of Congress who is in favor of subsidising home-built ships, and Capt. Codman, who is a freetrader. To the same number Dr. Oswald contributes an article on "Changes in the Climate of North America." Judge Jameson continues the discussion of the means of preserving our civilization from the fate that has befallen the civilization of Egypt, Assyria, Greece, and Rome. Julian Hawthorne discourses of "Literature for Children," Dr. Schaff sketches "The Development of Religious Freedom," and Dr. Newton and the Rev. A. G. Mortimer discuss "Recent Criticisms of the Bible," from the Broad and High Church points of view. We mention last an article by Prof. Eggert, entitled "A Plea for Modern Languages," which will be found to possess a special interest for readers of this magazine. Prof. Eggert's view is, in brief, that too much is attempted in the way of linguistic teaching in the courses of most of our high schools and colleges. He holds that there are very few who can master a modern language while engaged in the study of an ancient one, and therefore suggests that, as a rule, boys and young men engaged in acquiring a liberal education should take up either ancient or modern languages, but not both.

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The book is a wonderful repertory of linguistic information. In general fullness, as well as in accurate copiousness of definition and etymology, it is unrivaled.—*The Journal of Education, Halifax, N. S., Oct.*, 1880.

It has all along kept a leading place, and the New Edition brings it fairly up to date.—*London Times, June*, 1882.

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CANADA SCHOOL JOURNAL

Entered according to Act of the Parliament of Canada, in the year one thousand eight hundred and eighty-one, by W. J. Gage & Co., in the office of the Minister of Agriculture.

VOL. IX. TORONTO, JUNE, 1884. No. 6.

Table of Contents.

EDITORIAL :— PAGE

The Superannuation Fund 121
History for Public Schools 122
The History of Education 122
Teachers and Text-Books 123
Weekly Edition of the CANADA SCHOOL JOURNAL .. 123
Manitoba 123
Quebec 124
More about School Books and Authors 124
A New Enterprise 124
Reports of Cases 124

MATHEMATICAL DEPARTMENT :—

First-Class Algebra Paper 125
The Examination of Students in Training Colleges (Eng.) December 1884 .....
Arithmetic 125
Selected Problems 126
Algebra 127

CORRESPONDENCE 128
The Personal Character and Example of the Teacher 128

SPECIAL ARTICLES :—

The Study of Science 129
Salaries in the United States 130
We Learn to do by Doing 130
Normals—Who Ought to Attend? 132

EXAMINATIONS QUESTIONS :—

Grammar 133

PRACTICAL DEPARTMENT :—

Topical Speiling 135
" Exercises 135
Methods of Teaching Reading 135
Promotions 136
Bad Light for the Eyes 136
How far Shall I Help the Pupil? 136
How Will They Develop? 137
Hygiene 137
Practical Teaching 137
Unqualified Teachers 137

NOTES AND NEWS :—

Ontario 138
Nova Scotia 139
England 140
General 141

READINGS AND RECITATIONS :—

A Story of Four Boys 142
Hand in Hand with Angels 142
The Little Philosopher 142

TEACHERS' ASSOCIATIONS 143
REVIEWS 144

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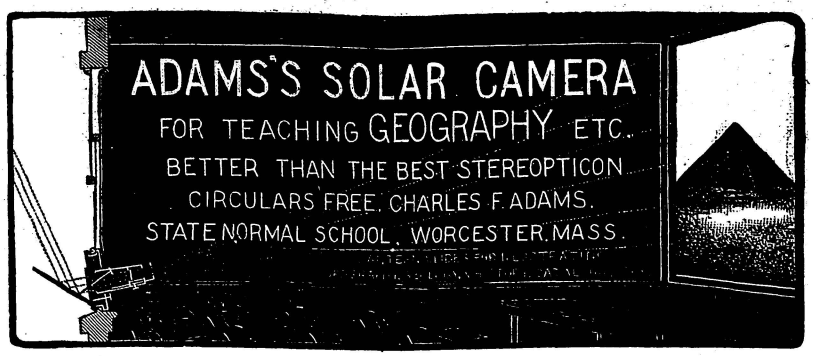
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The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

THE SUPERANNUATION FUND.

In the course of a discussion in the House on March 10th., DR. MCLAUGHLIN stated that a change in the present system was needed. He pointed out that the fund now costs the province $40,000 a year, $438,736 having been paid out, and $167,390 paid in, making a charge of $272,335 on the province during twelve years. He thought that this burden on the finances of the province should not be increased, and that the door should be shut against any more teachers paying into the fund. He would not advocate any system which compelled teachers to pay a certain amount of money into the fund, and prevented them from enjoying it. Nowhere on this continent, outside of Canada could such a system be found in vogue.

HON. G. W. ROSS, (Minister of Education) said he had given the subject some attention, and hoped during the recess to obtain the views of teachers on it. When the fund was instituted, teachers were made civil servants, on the ground that the teacher's salary was very low, that he was a public benefactor, that he was spending his time more in the interests of this province than in his own interest, and by making this allowance it was thought an appropriation would be made which would serve him when he was no longer able to act as a teacher. Mr. Ross thought it was a mistake to consider the teacher a civil servant. Although the salary was not high, the profession was one in which they should endeavor to cultivate a higher feeling of independence than was usually attributed to civil servants. Two views of the matter presented themselves. One was that *the fund should be self-sustaining*, in which case the $4.00 a year now contributed would have to be immediately increased to $16.00, and eventually to $20.00. On the other view, namely *the abolition of the fund*, they must not overlook those who are now sharing in it, and the refund to those who had not yet become claimants upon it. The amount due to those not yet pensioners was about $100,000. Mr. Ross was not prepared to say what he would do, or what he thought best. He hoped to receive information during the recess which would enable him next year to bring down a scheme to make it self-sustaining or else provide for its abolition.

MR. MEREDITH thought there was no necessity of grafting on the provincial system any scheme of superannuation, and it was far better to pay those in the employ of the Province as they should be paid, so that they might be enabled to save something against a rainy day, rather than that they should be dependent on the Province for a gratuity.

HON. O. MOWAT thought that if the teachers had not received this allowance some of them would be actually starving. Nobody could dispute the fact that teachers' salaries were so low that nothing could be saved from them, and it would be a lamentable thing if those who had spent their lives in performing their duty, the most important, perhaps, in the State, should be deprived of its assistance. He trusted that the Minister would be able to arrive at some scheme which would meet the object of the fund without increasing the burden on the province. MR HARCOURT said that if the Minister of Education were to address a circular to the teachers, fully ninety per cent. of them would favor the abolition of the fund.

In this Mr. Harcourt was undoubtedly correct, but it does not necessarily follow that a majority of the teachers know what is best to be done. The young and inexperienced do not yet fully appreciate the injustice of miserable salaries. Those who have entered the profession as a mere step-ladder by which they hope to reach something better, will naturally try to escape any burden for the general good of their temporary profession. Their permanent interest lies elsewhere. But these two classes form a majority of our teachers. We shall not pretend to dogmatise on a question admitting of so much diversity of opinion. At any rate teachers must prepare themselves to give their decision. If any means can be devised for adding about fifty per cent. to present salaries, the superannuation fund will no longer be a matter of importance. In the words of Mr. Mundella, the English Minister of Education, "teachers would know how to deduct their own per cent., and they would know how to make their own investments." Meantime, the fund is important and the question of its abolition deserves very serious attention.

One of the leading denominations has lately been successful in establishing an augmentation fund for the purpose of bringing up all salaries of its ministers to a certain fixed minimum. If something of the sort could be done for teachers the superannuation fund might be abolished forthwith. Indirectly,

such a fund might be made to tell powerfully on the advancement of the teaching profession. We have previously called attention to the proposal to give every teacher a direct interest in the government grant in proportion to his professional standing. Why should trustees derive the whole benefit of the grant? Why should stagnant mediocrity be on the same footing in the eyes of the Department as progressive talent? If this dead level in the matter of government grants were broken up, the best men would not drift off to easier and better paid professions. Any one who holds a second class grade A certificate to-day, can easily and certainly secure better remuneration for less labor in some other occupation. Either a better system must prevail, or teaching must remain a sort of caravansary in which the flower of our youth stay all night, and sail off by the first boat in the morning.

HISTORY FOR PUBLIC SCHOOLS.

We lately gave a brief discussion of the questions, What History is suitable for our Public Schools? How should the vast subject of History be introduced? Several opinions of eminent authorities were presented, and some correspondence on the subject published. We return once more to the topic to insist on a reconstruction of the programme, and to effect, if possible, a reformation in the method of teaching history to our junior classes. We shall remain true to our own plan and begin with the most recent writers. Let us hear J. G. FITCH, M.A., *Lecturer on Teaching at Cambridge*, and one of Her Majesty's Senior Inspectors of Schools. Here is his evidence dated January, 1881:—"How then should we begin to teach English History? Not certainly by plunging at once into the story of Julius Cæsar and the Druids; nor by giving a number of dates to be learned, to form a framework for pictures we mean to paint. I should first give a short series of lessons either orally, or from a well written reading book, if I could find one, with a view to make some simple and fundamental historical ideas intelligible—a *state*, a *dynasty*, a *monarch*, a *parliament*, *legislation*, the *administration of justice*, *taxes*, *civil and foreign war*. Scholars would thus see what sort of matter history had to do with, and would be prepared to enter on the study with more interest. Then a general notion should be given of the number of centuries over which our history extends. Thus a sort of Time-map divided into nineteen centuries is roughly constructed, on the same principle as . . . . the meridian lines of a geographical map. But, as soon as this is done, the task of selection begins. The teacher is by no means bound to follow blindly the course prescribed by the text-book. On the contrary it will be far better to fix upon the most characteristic periods, to cause them to be studied with fulness and exactness, and to reserve the chronicle of the less notable reigns until afterwards. The person who understands these well is, as far as history is concerned, a well-informed man, even though he is unable to repeat in due order the list of sovereigns, and to tell their relationship to each other. . . . . It is absurd to find children knowing about the Heptarchy and the Feudal System, and yet not knowing how our present Parliament is constituted and what are its duties and functions."

Our next witness is JAMES PYLE WICKERSHAM, M.A., formerly Principal of the Pennsylvania State Normal School, State Superintendent of Education, etc. His evidence bears date January 1865, and reads as follows:—"The first historical matter I would place in the hands of children to be read or studied would be what I have denominated Fragments of History. Children commence learning all things by fragments; and, if written in a suitable style, they will read the kind of writings now designated with remarkable avidity. This matter, in the form of voyages, travels, biographical sketches, historical narratives, may be arranged in lessons for reading in schools, it may be studied and recited, or it may be read at home. They can accumulate in this way a vast store of facts before they reach the age of twelve, and before this age they are generally unable to enter upon a more systematic course of study.

I would next require children to study in detail the principal facts in the History of their native land. No one can well do without this knowledge, and to the citizen it seems indispensable. I am well aware that the history of one country cannot be fully understood without some knowledge of the histories of other countries with which it has been connected. But teaching must begin somewhere, and less difficulty will be found in commencing with the history of one's own country than with that of distant countries, or with general history. The reason is that pupils are better acquainted with the events that have transpired in their own country than with those that have transpired in others, and are naturally more anxious to increase their knowledge in respect to the former than in respect to the latter. A knowledge of the history of their own country is about all that can be expected of pupils in our common schools, but pupils in high schools and colleges should study universal history. So far as the laws of history can be inferred from the observed facts it is an empirical science, and must be taught according to the principles of the *Inductive Method*. Methods applicable to all other studies are employed in a higher sense in this. There is no good reason why history should not be as interesting to the young as fiction. Facts of history can be found adapted to pupils of any age, and expressed in forms which render them agreeable to every taste; and the teacher who fails to do his duty in selecting them can offer but a poor excuse."

We adjourn for the present, but intend to invite other witnesses who will place before the jury of educational opinion the necessity of Canadian History for Canadians, and the History of *recent times* as the introduction best suited to the average citizen.

THE HISTORY OF EDUCATION.

A very slight knowledge of mineralogy would have prevented Jacques Cartier from mistaking quartz crystals for diamonds and would have saved him much useless trouble. It is always important to know what has been attempted and what accomplished before we undertake new experiments of our own.

Frequently a few historical or scientific facts may save us the labor of proving over again what was long since investigated. Perhaps there is no other department in which men are more prone to neglect the results of previous explorers than education. This partly accounts for the *ex cathedra* dogmatism of shallow doctrinaires, who are always ready to pass their quartz for diamond and expatiate on its purity with the vehemence of a patent medicine vendor. One cure for the prevalent empiricism in educational methods is found in the study of mental science and the laws of mental evolution and development. Another, almost as important, lies in the history of the educational systems that have prevailed in various countries, especially those of modern times. There we may see particular theories clothed with practical application and worked out to their legitimate results, and thus save ourselves from the repetition of demonstrated error. We may gather valuable suggestions for new progress as we note the principles and the steps of the old. The scientific educator cannot afford to neglect the results.

TEACHERS AND TEXT-BOOKS.

A text-book for elementary schools to be successful must of necessity be the work of a practical teacher. The author must have some grasp of methods, some comprehensive knowledge of the best ways of presenting the subject matter to beginners. There is no other principle of early education more firmly established beyond all controversy. Some of the worst text-books on mathematics for junior students have been produced by writers who were themselves eminent mathematicians. It were easy to draw illustrations from science, literature, music and other departments. When the mere technical skill of the author is not supplemented by adequate knowledge of educational facts and laws it is quite safe to predict the same conspicuous failure in the future as in the past.

Mr. O'Brien, the lately appointed drawing master for the public schools of Toronto, is undoubtedly a good water color painter. Quite as undoubtedly also he is not an experienced practical teacher, and, notwithstanding the skill of his fingers, he will have a great deal to learn in his new position before he understands the best methods of teaching the elements of drawing to young children. When Mr. O'Brien entered on his duties he recommended Prof. Walter Smith's books, which are the result of half a lifetime spent simplifying and systemetising the course suitable for public schools. Owing to some misapprehension, however, on the part of the Board these books were not immediately introduced. In the meantime, at the request of a Toronto Publishing firm, one of whose members is an active member of the Toronto Public School Board, Mr. O'Brien has, we believe, notwithstanding his lack of public school experience, undertaken to prepare a series of drawing books. No doubt he has done this the more gladly from a hope that they will be used in the Toronto schools. Let Mr. O'Brien first prove himself a competent teacher of the subject he has undertaken, and then we see no good reason why he should not have an opportunity of being heard from as an author. But we protest against the time of the pupils and money of the citizens being wasted to enlarge the income of even an artist, and increase the profits of a trustee. As to Mr. O'Brien's ability complaints have already been made, which go far to show that he is not the right man in the right place, and does not possess the first qualifications of a practical teacher.

We shall hold over further discussion of this important matter until next issue, when we shall give some interesting points on this question, believing that it will be of service to the profession and public generally to thoroughly ventilate the whole subject.

WEEKLY EDITION OF THE CANADA SCHOOL JOURNAL.

We have lately been urged by prominent educationists to make still greater efforts to meet the growing wants of education in the Dominion. We have received definite proposals to issue a weekly edition, and generous offers of support to make it an assured success. The great strides of educational progress that have been made since the JOURNAL was founded in 1875, and the favor with which it has been received in educational circles in all the provinces are certainly very encouraging. No doubt a weekly educational journal will appear as soon as the country demands such further assistance, and we know of none more likely than the CANADA SCHOOL JOURNAL to enter first on this enlarged mission. We shall be glad to hear from our friends throughout the teaching profession.

MANITOBA.

The Legislature has, during the present session, made an important change in the mode of levying taxes for the support of rural schools. Hitherto each school section, or district, as it is called, was compelled to raise from local taxation, every dollar required for the support of its school, except the Government grant of one hundred dollars. This law bore very hardly upon newly settled districts and tended toward the prevention of the establishment of schools in new settlements.

The change made requires three-fourths of the expenses of each school, not exceeding in each case four hundred dollars, to be raised from a tax upon the whole municipality and the balance from the school district, thus ensuring to every school a minimum sum from the general tax, at the same time leaving each free to increase its expenditure from a local tax.

The Normal School under its new regulations is proving very successful. The first session at Birtle during the month of May was well attended and excited great interest. Principal Goggin has won golden opinions by the knowledge he displays of his subject and the enthusiasm he succeeds in infusing into the students. At the close of the sessions both at Brandon and Birtle, Mr. Goggin was the recipient of addresses from the students, expressing their appreciation of the benefits they had received from their attendance.

The offices of the Education Department have been re-

moved to the building lately occupied as Government offices, accommodation being provided for both sections of the Board of Education and the Council of the University.

The school law of the province being now included in several Acts, Mr. Somerset, Superintendent of Education, is engaged upon the compilation of all the unrepealed portions of these Acts into a manual of easy reference for School Trustees.

The number of school districts increased from 182 at the beginning of 1883 to 328 at the commencemeut of 1884.

This new province has been highly favored in having at the head of its Educational affairs so able a gentleman as Mr. Somerset, who, although new to the place, has shewn most admirable administrative tact and ability, and has proved himself a worthy successor to the Ven. Archdeacon Pinkham, who for ten years with distinguished success held the educational helm.

QUEBEC.

A great advancement has lately been made in Educational affairs in the Province of Quebec during the past two years. It is universally conceded that the credit of this improvement is largely due to the energetic efforts and skillful management of the Secretary of Educational Department, Rev. Elson I. Rexford. The conscientious energy with which he is enforcing school regulations, and his assiduous attendance and effective service at teachers' conventions, bid fair to place the Quebec system in the front rank.

MORE ABOUT SCHOOL BOOKS AND AUTHORS.

Elsewhere we have pointed out how a disgraceful attempt is about to be made to manipulate for personal gain the text-books on Drawing for use in Toronto schools, and to supplant the books of Professor Walter Smith, which are recognized as the standard works on the subject in the provinces of Ontario, Quebec, Nova Scotia, New Brunswick and Prince Edward Island, besides being used very largely in every state in the Union.

Our attention has been called to the course pursued by a teacher in music in one of our Normal Schools, which will require some explanation.

It is stated there has been during the past and previous sessions a series of books and a system adopted of teaching music known as National Music Course, by Mason, Holt and two other masters who together are the supervisors of music in Boston public schools.

These books and this system were adopted by the aforesaid teacher as the best extant, and we believe are generally recognized as the most popular in the United States, where considerable attention is given to the study of music in schools.

However a change has come over the spirit of his dream and the teaching of music henceforth must be done after a different fashion. The books and system of a former session are discarded—a new series and a new system must forsooth be had at once. The question naturally arises why should there be so radical a change in the views of our Normal Musical Professor? Why should all our teachers in training be led a different road from the one taken in former sessions by the same gentleman? Is it because a new and better way has been found? This can scarcely be the case, especially as the books and system last adopted are, we believe, discredited in most of the best schools in the United States, and the ones displaced are held high in public favor. Will the answer not be found in the fact that the same publishing firm who would manipulate if possible the Drawing interests of the Toronto Schools has approached the Normal School Master, and secured his name upon the title page, and instead of continuing as we had in the session of 1883, a series of books by Messrs. Mason, Holt &c., called National Music Course, we now have the *Normal Music Course*, by Holt & Tufts, adapted to Canadian schools, by *S. H. Preston, Teacher of Music, Normal School, Toronto.* In the mean time while Teachers and Publishers have benefited the booksellers are left with a considerable quantity of the old books and a change in the system of teaching music is quietly brought about. Do the teachers in training and the country at large benefit by the change? We shall see. We wonder what the Minister of Education will have to say?

A NEW ENTERPRISE.

From representations that have been made to us we have been led to contemplate the issue of a weekly journal which will occupy a field somewhat different from that of any now before the public. We believe there is a mission for a paper having as a feature cartoons illustrating political events of the day, *independent in politics*, and giving attention to *religious, temperance, and social reforms*, combining the best features of the ordinary newspaper with those of the magazine and the humorous periodical. The publishers of the CANADA SCHOOL JOURNAL are in treaty with the proprietors of a new and rapid process recently produced in Germany and specially adapted to bring out political cartoons and sketches with effect. As soon as matters have assumed a more definite shape we shall be prepared to make further announcements.

REPORTS OF CASES.

The *Pall Mall Gazette* cites some more cases illustrating the quality of the learning furnished by the English board-schools. The study was geography. The children were able to give an accurate list of the exports of Norway, but could not recall the picture of a fiord. They knew that the latitude of Paris was 49 degrees, but when asked, "What is latitude?" they were either dumb, or gave such answers as—"Latitude means lines running straight up;" "Latitude means zones or climate;" "Latitude is measured by multiplying the length by the breadth." Correct lists of imports were given, but customs duties were defined by a girl, "Customs are ways, duties are things that we have to do, and we ought to do them;" by a boy, "Customers' duties are to go to the places and buy what they want, not stopping about, but go out when they are done."

We give a few sentences uttered by teachers in our hearing during the past few days:

"Every one of the teachers present were discouraged."
"That man was me."
"If I was in your place, I shouldn't have done it."
"It taint no use for me to try."
"I done that myself."
"He oughtened not to have carried one."
"He is a good ways from right."

This list could be indefinitely multiplied.

Mathematical Department.

FIRST-CLASS ALGEBRA PAPER,

Set for Pupils' Examinations of the College of Preceptors, Christmas, 1883.

1. Given $4x-5y=18=3(5x+2y)$, and $z=0$, find the value of $\sqrt[3]{[(3x+y-2z)(5z-4y+2x)-7z^2+2x^2-3y^2-5xy]}$.

2. Prove, in any way, that
$$a^2(b-c)(b+c-a)^2+b^2(c-a)(c+a-b)^2+c^2(a-b)(a+b-c)^2 = (a-b)(b-c)(c-a)[2(ab+bc+ca)-a^2-b^2-c^2].$$

3. Reduce to its smplest form
$$\frac{4x^3-3x+5}{x^3+1}-\frac{1-2x}{x^2+x+1}+\frac{6}{1-x}.$$

4. Solve the simple equations :—

(i.) $$1-\frac{1-\frac{3x}{5}}{1-\frac{2x}{5}}+\frac{1+\frac{3x}{2}}{1+\frac{5x}{2}}=\frac{2+5x-x^2}{10+21x-10x^2}.$$

(ii.) $$\left.\begin{array}{l}(2x-3)(3y+5)-2(x-y)=(4\cdot5-3x)(3\cdot5-2y)+12\cdot5\\ 3x=2y+3\cdot75\end{array}\right\}.$$

5. Solve the quadratic equation :
$$\frac{7x-2}{9}-\frac{3x+4}{4-3x}=\frac{9x+1}{7}.$$

6. A Bill upon which 576 Members voted was lost on a division ; subsequently, the same Members voting, it was carried by a majority half as large again as it was originally lost by, and the majority in the latter case equalled the number of those who first voted for the Bill. Find how many voted on each side, and how many Members changed their minds.

7. A messenger has to go a journey of 20 miles, and times himself to do it in a certain time. After walking 8 miles, he is delayed one hour, and is consequently obliged to increase his former rate by two miles an hour. Find his original rate of walking.

8. What values of p and q will make $4x^4+4px^3+16x^2+qx+9$ a perfect square ?

SOLUTIONS.

1. $\left.\begin{array}{l}4x-5y=18\\ 5x+2y=6\end{array}\right\}$, therefore $x=2$, $y=-2$, and $z=0$, therefore
Expn. $=\sqrt[3]{[(6-2)(8+4)+8-12+20]}=\sqrt[3]{(48+16)}=\sqrt[3]{64}=4$.

2. If $a=b$ the left hand member vanishes $\therefore a-b$ is a factor, and hence $(a-b)(b-c)(c-a)$ is a factor, for the expression is symmetrical with respect to a, b, and c. It is of five dimensions, and we have found 3 factors, hence there must be only another factor of two dimensions of the form $P(a^2+b^2+c^2)+Q(ab+bc+ca)$. Hence put left hand member
$$=(a-b)(b-c)(c-a)[P(a^2+b^2+c^2)+Q(ab+bc+ca)]$$
where P and Q include all numerical factors. Then to find P and Q put $c=0$ on both sides and we have
$$a^2b(b-a)^2+b^2a(a-b)^2+0=(a-b)(-ab)[P(a^2+b^2)+Q(ab)]$$
or, dividing through by $-ab(a-b)$, this becomes
$$-(a^2+b^2)+2ab=P(a^2+b^2)+Q(ab),$$
from which it is plain that $P=1$, and $Q=2$, and consequently left hand member
$$=(a-b)(b-c)(c-a)[-a^2-b^2-c^2+2(ab+bc+ca)].$$
See May Number—*Elementary Algebra.*

3. Expression $=(4x^2-3x+5+2x^2-3x+1-6x^2-6x-6)\div(x^3-1)$
$=-12x\div(x^3-1)=12x\div(1-x^3)$.

4. (i.) Sinister member
$$=1-\frac{5-3x}{5-2x}+\frac{2+3x}{2+5x}=\frac{x}{5-2x}+\frac{2+3x}{2+5x}=\frac{10+13x-x^2}{10+21x-10x^2}.$$
Therefore, since denominators are equal, we have
$2+5x-x^2=10+13x-x^2$ and $8x=-8$, $\therefore x=-1$.

(ii.) $6xy+10x-9y-15-2x+2y=15\cdot75+10\cdot5x-9y+6xy+12\cdot5$,
$$\left.\begin{array}{l}\therefore\ 18\cdot5x+2y=43\cdot25\\ 3x-2y=3\cdot75\end{array}\right\},\ \therefore\ 18\cdot8x=47,\text{ and } x=\tfrac{470}{188}=\tfrac{10}{4}=2\cdot5.$$
Hence $2y=\cdot75-3\cdot75=-3$, $\therefore y=-1\cdot5$.

5. $$\frac{3x+4}{4-3x}=\frac{7x-2}{9}-\frac{9x+1}{7}=-\frac{32x+23}{63},$$
$$189x+252=96x^2-59x-92,\ 96x^2-248x-344=0,$$
i.e., $$12x^2-31x-43=0=(x+1)(12x-43),$$
therefore $$x=-1 \text{ or } 3\tfrac{7}{12}.$$

6. Let $x=$ No. who voted for (first division), then $576-x=$ No. against, therefore first majority $=576-2x$. Hence, taking account of second division, we have
$$x=\tfrac{3}{5}(576-2x) \text{ and } x=216.$$
Hence, in first division, 216 voted for, and 360 against. The majority in second division $=216$,
therefore voters against $=\frac{1}{2}(576-216)=180$,
and voters for $=396$.
Hence 180 changed their minds.

7. Let $x=$ original rate, $\therefore$ time originally allowed $\frac{20}{x}$
hence $$\frac{20}{x}=\frac{8}{x}+1+\frac{12}{x+2},\ \textit{i.e.},\ 1=\frac{1}{x}-\frac{12}{x+2}=\frac{24}{x\cdot(x+2)}$$
$\therefore x^2+2x-24=0$, and $x=4$ miles per hour.

8.
$$\begin{array}{r|l} & 4x^4+4px^3+16x^2+qx+9(2x^2+px+3.\\ & 4x^4\\ \hline 4x^2+px & \begin{array}{l}4px^3+16x^2\\ 4px^3+p^2x^2\end{array}\\ \hline & (16-p^2)x^2+qx+9\\ 4x^2+2px+3 & 12x^2+6px+9\\ \hline & \cdot\ \cdot\ \cdot\ \cdot\end{array}$$

By conditions of question, $16-p^2=12$, $q=6p$,
$\therefore p^2=4$ and $p=\pm2$, $\therefore q=\pm12$.
Or we may solve the question by writing
$$4x^4+4px^3+16x^2+qx+9=(2x^2+ax+3)^2,$$
and then equate the coefficients of like powers on the two sides of the equation. The result is the same.

THE EXAMINATION OF STUDENTS IN TRAINING COLLEGES (ENG.), DECEMBER, 1883.

ARITHMETIC.

1. Find the length of the edge of a cubical tank that contains 2,143 gallons and 3 quarts of water. Given, that 1 gallon of water weighs 10 pounds, and 1 cubic foot of water weighs $62\frac{1}{2}$ pounds.

2. A bicyclist ran $4\frac{1}{4}$ miles in 17 minutes. The distance made in the last minute was $\frac{3}{5}$ of that made in the first minute ; and the distance in each successive minute was less than that made in the preceding minute by the same quantity. Find the average and the decrease per minute.

3. A money lender charges 10% on a three months' bill, taking his 10% from the amount of the loan when the money is lent. What yearly income will he have from a capital of £5,561 constantly employed in this way ?

4. If cloth 42 inches wide, weighing $6\frac{1}{3}$ ounces per yard, and made of wool worth 3s. 9d. per pound, be sold for 8s. 2d. per yard, how many ounces will there be in a yard of cloth 27 inches wide, made of wool worth 6s. 5d. per pound, and selling at 5s. 6d. per yard ?

5. If an income tax of one penny in the pound produce £3,857,-216 11s. $1\frac{3}{4}$d., and the capital of the country be supposed to produce an income of $2\frac{7}{8}$% ; find the capital of the country.

6. *A* put into a partnership £4,815 for one year and five months ; *B* put in £3,531 for two years and one month ; *C* put in £6,099 for ten months. Their profit was £1,926. What was the share of profit of each ?

7. A bill for £3,511 10s. $6\frac{3}{4}$d. was discounted for £3,497 3s. $1\frac{1}{2}$d. at the rate of $2\frac{1}{2}$%, simple interest per annum. For what time was t drawn ?

8. What sum of money at $3\frac{1}{2}\%$ per annum, simple interest, will amount to £13,083 1s. $6\frac{3}{4}$d. in 3 years and 146 days?

9. Find to two places of decimals the diagonal of a face of a cube which contains 95443·993 cubic inches.

10. Find the value of $7 + \cfrac{1}{7 + \cfrac{1}{7 + \cfrac{1}{7+\frac{1}{7}}}} \times$ 1 ton, 2 cwts., 3 qrs., 1lb, in tons.

11. Multiply 31·027 by 0·0057, and divide the result by 27·64899.

12. Find the value of—

$$\frac{\frac{1}{13}+\frac{1}{17}}{\frac{1}{19}+\frac{1}{21}} \times \frac{\frac{1}{5}+\frac{1}{7}}{\frac{1}{3}+\frac{1}{4}} \times £56\ 8s.\ 0\tfrac{1}{4}d.$$

13. Find the compound interest on £104,166 13s. 4d. for four years at 3% per annum.

14. If £10,425 in $3\frac{1}{2}$ per cents. be sold out at $102\frac{3}{8}$, and the proceeds invested in $2\frac{1}{2}$ per cents. at $69\frac{3}{8}$, what will be the change of ncome, brokerage of $\frac{1}{8}$ per cent. being charged on each transaction?

SOLUTIONS.

1. Tank holds 8575 quarts: 4 quarts weigh 10lbs, ∴ 1 quart weighs $\frac{10}{4}$lbs.
Weight of water $= (85750 \div 4)$lbs.
∴ No. cubic feet in tank $= 85750 \div 4 \times \frac{2}{125} = 8585 \div 25 = 343 = 7^3$
∴ length of edge $= 7$ feet.

2. He went 17 quarter miles in 17 minutes, ∴ average rate $= \frac{1}{4}$ mile per minute. The middle minute must have been travelled at the average rate, *i.e.*, during the ninth minute he went $\frac{1}{4}$ mile = 440 yards. If D = decrease per minute in yards we have $440 - 8D = \frac{3}{5}(440 + 8D)$ ∴ $D = 13\frac{3}{4}$ yards.

3. Interest $= \frac{1}{9}$ loan; amount in 3 months $= \frac{10}{9}$ loan; amount in 1 year $= (\frac{10}{9})^4$ loan. Amount of 6561 in a year
$= (\frac{10}{9})^4 \times 6561 = 65{,}610{,}000 \div 9^4 = 10{,}000$
∴ Income $= 10{,}000 - 6561 = £3439$.

4.
$$\left.\begin{array}{rcl} 42 \text{ in.} & : & 27 \text{ in.} \\ 6\frac{1}{8} \text{ oz.} & : & \text{Ans.} \\ 45 \text{ d.} & : & 77 \text{ d.} \end{array}\right\} :: 98\text{d.} : 66\text{d.}$$

$$\text{Answer} = \frac{42 \times 6\frac{1}{8} \times 45 \times 66}{27 \times 77 \times 98} = 3\tfrac{3}{4} \text{ oz.}$$

5. Income $= 2\frac{7}{8}\% = \frac{23}{800}$ capital; tax $= \frac{1}{240}$ income,
∴ tax $= \frac{1}{240} \times \frac{23}{800}$ capital $= \frac{23}{24} \times \frac{1}{8000}$ capital,
∴ capital $= \frac{24}{23} \times 8000$ tax $= 8000$ (tax $+ \frac{1}{23}$ tax).
$= 8000 \times 4{,}024{,}921$ " 12 " 6 $=$ £32,199,373,000.

6. Observe that $4815 = 15 \times 321$; $3531 \times 11 \times 321$; $6099 = 19 \times 321$,
∴ capitals are as 15, 11, and 19 shares of £321 each.
Then $(15 \times 17) + (11 \times 25) + (19 \times 10)$
$= 255 + 275 + 190 = 720$ shares for 1 month.
∴ gains are $\frac{255}{720}$, $\frac{275}{720}$, $\frac{190}{720}$ of 1926.
i.e., A's $= \frac{51}{240}$, B's $= \frac{55}{240}$, C's $= \frac{38}{240}$ of £1926
$=$ £682 " 2 " 6; £735 " 12 " 6; and £508 " 5, respectively.
Also $1926 \div 321 = 6$ shares $=$ profit,
i.e., 720 shares for 1 month, or 60 shares for a year, give 6 shares profit.
∴ rate of profit $= \frac{1}{10}$ or 10% on capital for a year.

7. £3511 " 10 " $6\frac{3}{4}$ − £3497 " 3 " $1\frac{1}{2}$ $=$ £14 " 7 " $5\frac{1}{4}$ $= 13797$ far.
$2\frac{1}{2}\% = \frac{1}{40}$; and £3497 " 3 " $1\frac{1}{2} = 3357270$ far.
$\frac{13797}{3357270} = \frac{3}{7280}$, which must $= \frac{1}{40} \times$ time in years.
∴ $\frac{3}{7280} \times 365 = \frac{1}{40} \times$ time in days $= \frac{3}{2}$,
∴ time $= 60$ days.

8. $3\frac{1}{4}\% = \frac{13}{400}$; 146 days $= \frac{2}{5}$ year $3\frac{2}{5}$; $= \frac{17}{5}$.
Amount of £1 for given time $1 + \frac{13}{400} \times \frac{17}{5} = \frac{2221}{2000}$ principal
∴ principal $= 2000$ amount $\div 2221$
$= 2000 \times 13{,}083$ " 1 " $6\frac{3}{4} \div 2221 =$ £11781 " 5 " 0 Answer.

9. Side$^3 = 95443{\cdot}993$, ∴ side $= 45{\cdot}7$
(Diagonal of face)^2 $=$ side^2 + side^2 (I. 47.)
$=$ 2 side^2
∴ diagonal of face $= \sqrt{2} \times$ side $= 1{\cdot}41 \times$ side.
$= 1{\cdot}41 \times 45{\cdot}7 = 64{\cdot}437$ nearly.

10. 1 ton, 2 cwts., 3 qrs., 1lb (long ton) $= 2547$lbs.
Fraction reduced $= 18200 \div 2549$.
Answer $= 2547 \times 18200 \div 2549$lbs $= 162\frac{1}{2}$ cwt $= 8\frac{1}{8}$ tons.

11. $31{\cdot}027 \times {\cdot}0057 \div 27{\cdot}64899 = {\cdot}00639$.

12. Expression $= (\frac{8}{4} \times \frac{309}{321}) \times (\frac{144}{245}) \times 54154$ farthings
$= 43092$ far. $=$ £44 " 17 " 9.

13. Amount of £1 $= (1 + \frac{3}{100})^4$
$= 1 + 4(\frac{3}{100}) + 6(\frac{3}{100})^2 + 4(\frac{3}{100})^3 + (\frac{3}{100})^4 = 1{\cdot}12550881$.
∴ Interest of £1 $= {\cdot}12550881$.
£104,166 " 13 " 4 $= 100{,}000{,}000$ farthings.
∴ Interest $= 12550881$ farthings $=$ £13073 " 16 " $8\frac{1}{4}$ Answer.

14. £10425 $= 104\frac{1}{4}$ hundreds.
∴ First dividend $= 104\frac{1}{4} \times 3\frac{1}{2} = 364\frac{7}{8}$.
$102\frac{3}{8} - \frac{1}{8} = 102\frac{1}{4}$ $=$ rate realized by sale of old stock.
$69\frac{3}{8} + \frac{1}{8} = 63\frac{1}{2}$ $=$ rate paid for new stock.
∴ Second dividend $= (104\frac{1}{4} \times 102\frac{1}{2}) \div (69\frac{1}{2} \times 2\frac{1}{2})$
$= \frac{3}{2} \times 102\frac{1}{4} \times 2\frac{1}{2} = \frac{7}{10}$.
Difference $= 383\frac{7}{10} - 364\frac{7}{8} = 18\frac{9}{10} =$ £18 " 11 " 3 Answer.

SELECTED PROBLEMS,

SUITABLE FOR MATRICULATION AND TEACHERS' EXAMINATIONS.

I.—ARITHMETIC.

1. Investigate the rule for finding the square of a number exemplified in the following:—To find the square of 297.

297

49
126
28
81
36
4

Square $= 88209$

NOTE.—This is an easy application to arithmetic of the algebraical process $(a+b+c+\&c.)^2 = a^2 + 2ab + \&c. + b^2 + 2bc + \&c.$ the position of the figures being made to account for their local values.

2. The old standard bushel was defined by statute to contain 2,150 cubic inches but on examination it was found to contain only 2,124. By the Act of 1824, the bushel was declared to contain 2,218 cubic inches. Examine the real loss on the rental (1,075£) of a farm (which was calculated on a certain per centage of the selling price of the corn grown), supposing the price per bushel to remain the same.

NOTE.—First rental : second rental $= 2{,}218 : 2{,}124$,
i.e., £1,075 : " $=$ " " &c.

3. Having three separate parcels of powders weighing respectively 84lbs, 3oz., 15dwt., Troy; 45lbs, 10oz., 4dr., 12grs., Apothecaries; and, 32lbs, 7oz., 3·712drs., Avoirdupois; how can I subdivide them into parcels weighing each the same integral number of grains?

NOTE.—1lb Troy $=$ 1lb Apoth. $= 5760$grs.; 1lb Avoir. $= 7000$ grs. Reduce each weight to grains and take the G. C. M.

4. The link of Gunter's chain being $7\frac{23}{25}$ inches, prove that ten square chains make an acre.
The Scotch ell being 37·069 inches, and 24 ells making the Scotch chain, what difference (in square feet) is there between 55 English and 42 Scotch acres?

NOTE.—1 link $= 7{\cdot}92$ inches, ∴ 1 chain $= 792$ inches $= 66$ feet $= 22$ yards.
10 square chains $= 220 \times 220$ square yards $= 4840$ square yards.
Scotch chain $= 37{\cdot}069 \times 24$ inches $= 37{\cdot}069 \times 2$ feet $= 74{\cdot}138$ feet.
42 Scotch acres $= 42 \times 741{\cdot}38 \times 741{\cdot}38$ square feet; 55 English acres $= 55 \times 4840 \times 9$, &c.

5. A grocer buys a stock of tea, and sells $\frac{5}{8}$ of its nominal amount at 82 cents per lb, thus clearing \$190; he now calculates that if he sells the remainder at 85 cents per lb he will, on the whole, make 30% on his outlay; but he has forgotten to take into account a loss

in weight of 2% by waste in handling. How much less cash will he receive than he expected?

NOTE.—$\left.\begin{matrix}\frac{5}{8}\text{ tea @ }82\\ \frac{3}{8}\text{ tea @ }65\end{matrix}\right\} = \text{tea @ } 82\tfrac{1}{2} = \tfrac{13}{16}$ (tea × cost)

$\therefore 82\tfrac{1}{2}$c. $= \tfrac{13}{16}$ cost per lb, and cost per lb $= 63\tfrac{6}{13}$c.

Gain on whole @ 82 would have been \$228.

Gain on 1lb $= 82 - 63\tfrac{6}{13} = 18\tfrac{7}{13}$c., $\therefore$ number of pounds bought $=$ \$228 $\div 18\tfrac{7}{13}$c. $=$ &c.

6. Reduce to its simplest form $\frac{\sqrt[3]{51}}{119}$ of $\frac{\sqrt[3]{360}}{441}$ of $\frac{\sqrt[3]{225}}{343}$.

Expression

$$= \frac{(\sqrt[3]{3}\times\sqrt[3]{17})\times(2\times\sqrt[3]{5}\times\sqrt[3]{3}\times\sqrt[3]{3})\times\sqrt[3]{5}\times\sqrt[3]{5}\times\sqrt[3]{3}\times\sqrt[3]{3}}{7\times17\times7\times3\times7\times3\times7\times7\times7}$$

$$= \frac{3\times2\times5\times\sqrt[3]{17}\times\sqrt[3]{3}\times\sqrt[3]{3}}{7^6\times17\times3\times3}$$

$$= \frac{10}{7^6\times17^{\frac{2}{3}}\times3^{\frac{1}{3}}}.$$

7. My watch was right at noon. In the evening, looking at a distant clock, I was unable to distinguish whether the clock showed five minutes to ten or ten minutes to eleven, my watch then being at twenty minutes past ten. After an hour or so, on looking at the clock, I was again unable to tell whether it pointed to eleven or to five minutes to twelve, and my watch was then at half-past eleven. What was the least possible error of the clock at the previous noon, supposing the rates of watch and clock to be uniform, and could I draw any inference as to the true time?

At first the clock is either 25 minutes slower or else 30 minutes faster than the watch. Afterwards the clock is either 35 minutes slower or else 25 minutes faster than the watch. So the clock either lost 10 minutes or lost 5 minutes while the watch went 70 minutes.

Time from noon to half-past eleven $=690$ minutes by the watch, during which the clock must have lost $\frac{69}{7} \times 10$ or $\frac{69}{7} \times 5$ minutes, $\therefore$ least error $=$ &c.

8. If the hour and minute hands of a clock are exactly alike, show that their position will always enable us to distinguish between them except after every interval of $5\frac{5}{143}$ minutes starting from noon, and the time by the clock will then be ambiguous except after every thirteenth interval.

9. Prove the following rule for computing interest at 6% per annum for a period of months and days:—

Multiply the number of months by 5, and add $\frac{1}{6}$ the number of days; multiply this sum by the principal expressed in dollars; the result will be the interest expressed in mills.

6c. $=$ int. of \$1 for 12 mos., $\therefore$ 5 mills $=$ int. for 1 month.

6c. $=60$ mills $=$ int. for 360 dys., $\therefore \frac{1}{6}$ mill $=$ int. for 1 day.

$\therefore 5 \times$ months $+ \frac{1}{6} \times$ days $=$ int.

10. By the Canadian Statute it is provided that the silver coins of the Canadian currency shall bear the same relation to the pound currency that the sterling silver coins bear to the pound sterling, being also of the same standard of fineness. Sterling silver is 92·5 per cent. fine, and from 1lb Troy of this metal are coined 66 shillings. The pound sterling is said to be equal to £1 4s. 4d. currency or \$4.86⅔, the pound currency being \$4. In Martin and Trübner's "Currency," the Canadian 10-cent piece is said to weigh 38·42 grs. and to be $\frac{9}{10}$ fine, but an analysis by Professor Croft shows that the fineness is that of sterling. The American mint asserts the value of this piece to be about 9⅞ cents, their dollar containing 345·6 grs. pure silver.

Examine the consistency of these stateme ts.

II.—ALGEBRA.

1. Multiply together $x^2 - \frac{9}{4}ax + \frac{1}{2}a^2 + \frac{5}{4}x - \frac{3}{4}a + \frac{1}{4}$ and $x^2 + \frac{15}{4}ax - a^2 - \frac{7}{4}x + \frac{3}{2}a - \frac{1}{2}$.

Divide the product by $\frac{1}{4}x^3 + \frac{1}{2}ax - 2a^2 - \frac{1}{4}x + 2a - \frac{1}{2}$ and extract the square root of the quotient.—*Toronto University, 1865.*

NOTE.—1st expression $= \frac{1}{4}(4x - a + 1)(x - 2a + 1)$. See *Teachers' Handbook*, p. 72.

2nd expression $= \frac{1}{4}(4x - a + 1)(x - 4a - 2)$

Divisor $= \frac{1}{4}(x - 2a + 1)(x + 4a - 2)$

$\therefore$ Quotient $= \frac{1}{4}(4x - a + 1)^2$, and sq. rt. $= 2x - \frac{1}{2}a + \frac{1}{2}$.

2. Prove $(a^2+b^2+c^2)^3 + 2(ab+bc+ca)^3 - 3(b^2+a^2+c^2)(bc+ca+ab)^2 = (a^3+b^3+c^3-3abc)^2$.

—*Cambridge, 1862.*

NOTE. Put $a^2+b^2+c^2=x$; $ab+bc+ca=y$; and observe that $x+2y=(a+b+c)^2$. Also put $a+b+c=z$, and observe that $a^3+b^3+c^3-3abc=z(x-y)$. Left hand member becomes $x^3+2y^3-3xy^2$, *i.e.*, $(x-y)^2(x+2y)$; *i.e.*, $z^2(x-y)^2$ *Q. E. D.*

3. If $z = \sqrt{(ay^2 - a^2)} \div y$, and $y = \sqrt{(ax^2 - a^2)} \div x$, prove that $x = \sqrt{(az^2 - a^2)} \div z$.

—*Toronto University, 1869.*

NOTE.—$y^2z^2 = xy^2 - a^2 \therefore x^2y^2z^2 = ax^2y^2 - a^2x^2$ (A)

$x^2y^2 = ax^2 - a^2$. Substitute for x^2y^2 in (A) and thus eliminate y.

4. Prove

$$\frac{y-z}{1+yz} + \frac{z-x}{1+zx} + \frac{x-y}{1+xy} = \frac{(y-z)(z-x)(x-y)}{(1+yz)(1+zx)(1+xy)}.$$

—*Toronto, 1871.*

NOTE.—Put the left hand member $=V$, clear of fractions, and we have,

$(x-z)(1+zx)(1+xy)+(z-x)(1+yz)(1+xy)+(x-y)(1+yz)(1+zx) = V(1+yz)(1+zx)(1+xy)$ Factor left hand member by putting $x=y$, &c. (see *Teachers' Handbook*, p. 85), and $(y-z)(z-x)(x-z) = V(1+yz)(1+zx)(1+xy)$. Divide through and $V =$ &c.

5. If $(ay+bx) \div c = (cx+az) \div b = (bz+cy) \div a$, then will

$$\frac{x}{a} \div b^2 + c^2 - a^2 = \frac{y}{b} \div (c^2 + a^2 - b^2) = \frac{z}{c} \div (a^2 + b^2 - c^2).$$

—*Toronto University, 1872.*

NOTE.—Put each of the given factors $= m$, whence

$acy + bcx = c^2m$, $bcx + abz = b^2m$, $abz + acy = a^2m$,

and by addition $(acy + bcx + abz) \div abc(a^2 + b^2 + c^2) = \frac{m}{2bc} =$ any one of required relations. Again combining,

$m(b^2 + c^2 - a^2) = 2bcx$. $\therefore \frac{x}{a} \div (b^2 + c^2 - a^2) = \frac{m}{2abc}$, and similarly for the other two.

6. If $x \div a(y-z) = y \div b(z-x) = z \div c(x-y) = 1$, prove that $ab + bc + ca = -1$.

—*Toronto University, 1882.*

NOTE.—Clear of fractions and transpose, and

$x - ay + az = bx + y - bz = -cx + cy + z = 0$.

Eliminate x from (1) and (2), also from (2) and (3) and

$$\frac{y}{z} = \frac{(a+1)b}{ab+1} = \frac{(c-1)b}{(b+1c)},$$ from which $ab + bc + ca = -1$.

7. If $x^2 + 2ayz = y^2 + z^2$, $y^2 + 2bzx = z^2 + x^2$, $z^2 + 2xy = x^2 + y^2$ show that $x(a+bc) = y(b+ac) = z(c+ab)$, and also that

$(1-a^2)(a+bc)^2 =$ anl $=$ anl.

—*Toronto University, 1870.*

NOTE.—Transpose so that

$x^2 = y^2 + z^2 - 2ayz = y^2 - z^2 + 2bzx = z^2 - y^2 + 2cxy$.

Taking (1)—(2), (1)—(3), and (2)+(3) we get

$z - ay - bx = 0$, $y - az - cx = 0$, $x - cy - bz = 0$; whence $x = cy + bc = (y - az) \div c = (z - ay) \div b$.

From the latter pair $y(b+ac) = z(c+ab)$, and by symmetry $= x(a+bc)$, which is the first part.

Resume $z - ay - bx = 0$, &c. Eliminate x from (1) and (2), from (1) and (3), and (2) and (2), and we get

$$\frac{y}{z} = \frac{c+ab}{b+ac} = \frac{1-b^2}{a-bc} = \frac{a-bc}{1-c^2}.$$

Now the square of the first is equal the product of the other two equal fractions,

$\therefore (1-c^2)(c+ab)^2 = (1-b^2)(b+ac)^2$,

whence by symmetry, &c.

8. If a, b, c be the roots of $x^3 + px^2 + qx + r = 0$, show that $\frac{a+b}{c}$, $\frac{b+c}{a}$, $\frac{a+c}{b}$ are the roots of the equation

$rx^3 + (3r - pq)x^2 + (r^3 - 2pq + r)x + (r - pq) = 0$.

—*Toronto University, 1872.*

NOTE.—Given

(1) $a+b+c=-p$, (2) $ab+bc+ca=q$, and (3) $abc=r$.

Required (4) $d+e+f=\frac{1}{r}(pq-3r)$, (5) $de+ef+fd=\frac{1}{r}(r^3-2pq)$,

and (6) $def=\frac{1}{r}(pq-r)$, where d, e, f are $= \frac{a+b}{c}, \frac{b+c}{a}, \frac{a+c}{b}$

Multiply (1) by (2) and

$$a^2b^2+ab^2+b^2c+bc^2+c^2a+ca^2+3abc=-pq. \quad (A)$$

$\therefore a^2b^2+ab^2+b^2c+bc^2+c^2a+ca^2=3r-pq; \quad \therefore d+e+f=\frac{1}{r}(2q-3r).$

Also, $a^2b^2+ab^2+\&c.+2abc=r-pq; \quad \therefore def=\frac{1}{r}(pq-r).$

Similarly from (A) $2pq-r^3=a^3b^3c^3+2(ab^2+a^2b+\&c.)+6abc,$

$$\therefore \frac{r^3-2pq}{r} = a^2b^2c^2+2\left(\frac{a+b}{c}+\frac{b+c}{a}+\frac{c+a}{b}\right)+6$$

$$= de+ef+fd.$$

9. If a, b, c are the roots of the equation $x^3+px-\frac{2}{5}r=0$, show that $a^5+b^5+c^5 : a^2+b^2+c^2=r : 1$.

—*Toronto University, 1873.*

As in (8) we have $a+b+c=0$, $ab+bc+ca=p$, and $abc=\frac{2}{5}r$.

Squaring (1) and substituting $2p$ for $2(ab+\&c.)$ we have

$$a^2+b^2+c^2=-2p \quad (A).$$

Cubing (1)

$a^3+b^3+c^3+3(a+b+c)(ab+bc+ca)-3abc=0, \quad \therefore a^3+b^3+c^3=\frac{6}{5}r \quad (B)$

Multiply (A) and (B) and

$$a^5+b^5+c^5+a^2b^3+a^2c^3+b^2a^3+b^2c^3+c^2a^3+c^2b^3=-\tfrac{12}{5}pr,$$

i.e., $a^5+b^5+c^5+(a+b+c)(a^2b^2+b^2c^2+c^2a^2)-abc(ab+bc+ca).$

$\therefore a^5+b^5+c^5=-2pr \quad C, \quad \therefore A \div C=r. \quad Q.\ E.\ D.$

10. If $a+b+c=0=x+y+z$, show that

$$4(ax+by+cz)^3-3(ax+by+cz)(a^2+b^2+c^2)(x^2+y^2+z^2)$$
$$-2(a-b)(b-c)(c-a)(x-y)(y-z)(z-x)=54abcxyz.$$

—*Toronto University, 1883.*

Correspondence.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—Much has been written regarding proper and remunerative employment for women. Silk culture, poultry raising and many other themes have been thoroughly ventilated and the result has no doubt been very beneficial. But there are many ladies who have no opportunity to raise silk worms or follow any employment of this kind. To this class I wish to open what to me was entirely a new field. Some three months ago an uncle of mine from Albany, N. Y., was visiting at our house. They were talking of plated ware which he was engaged in manufacturing; to gratify my curiosity, he made a plating machine and replated our knives, forks, spoons, and castor; it only cost $4, and it did the work perfectly. Some of our neighbors seeing what we had plated wanted me to plate some for them. Since then I have plated 22 days and have cleared during that time $94.34. At almost every house I got from $2.00 to $3.00 worth of plating to do, and such work is most all profit. Just for replating one dozen tea spoons I got $1.75. This work is as nice for ladies as for gentlemen as it is all indoor work, and any one can do it. My brother Anthony plated two days longer than I did and he cleared only $91.50. I am getting up a collection of curiosities. To any of your readers sending me a specimen I will send full direction for making and using a plating machine like mine, that will plate gold, silver, and nickel. Send small pieces of stones, ores, shells, old coins, &c. Any kind of geological specimens. What I want is to get as many different specimens from as many different places all over the country as I can. Please address,

MISS M. F. CASSEY,
Oberlin, Ohio.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—I wish an answer through the columns of your paper whether a teacher can be compelled to attend the conventions, and if so, how often. Yours,

WM. JNO. MCLEAN.

REPLY.—We do not know that a teacher can be *compelled* to attend. If he went under compulsion he would probably do more harm than good by his presence. At the same time we consider that every teacher owes it both to himself and to his profession to make some sacrifices of time and money for the purpose of making the conventions successful. Wide awake teachers make it a point of conscience to be present as often as possible and to labor for the elevation of the brotherhood of teachers. A compulsory attendance would in some cases entail a disproportionate expense, but a teacher who is habitually absent from the convention is very shortsighted with regard to his own real interests.—[EDITOR.]

THE PERSONAL CHARACTER AND EXAMPLE OF THE TEACHER.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR,—Children will form habits which will be the charm or the curse of the social circle, which will be instruments of good or evil to their fellow-men, and blessings or pests to their country. What sort of habits they shall form depends to a certain extent on their teachers.

"The personal influence of the teacher" it has been said "is continual in its effects. In a certain sense he is teaching always, and often when he least thinks of it. He is continually imparting his own likeness, reproducing in the minds of his pupils the impressions and convictions of his own. A silent influence is at work which he little suspects. The words which drop unobserved from his lips, the acts which he performs mechanically and immediately forgets, his daily habits and deportment, have their effect, and may be made subservient to the highest ends. The very way in which his school is managed, its order and impartiality, the tone of kindness which pervades it, and the reverence openly paid to what is good and true and generous, are so many parts of moral training." It is by these influences that the habits and character of children are formed. They are more powerful than direct teaching, for lessons only enforce what is right, but example allures to the practice of it.

It must not be forgotten that the influence of the teacher may be for evil as well as good. Hence the importance of striving earnestly by personal discipline for every qualification of a good teacher. It is important to remember that character cannot be assumed at pleasure; it is a growth which has its roots in the soil of bygone years: nothing is in the character which has not grown there. Yours truly,

MARY LADD.

Comber, Ont.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR,—As you have not in my opinion paid sufficient attention recently to educational affairs in the Queen City, I take the liberty of writing to you concerning a subject, which is at present causing some uneasiness among some of the public school teachers in our city. At the close of last year Mr. L. R. O'Brien was appointed Superintendent of Drawing in the Toronto public schools. The Inspector introduced him to the teachers with a flourish of trumpets, and Mr. O'Brien in a two hours speech, which some admired very much because they did not understand what he meant, laid down some theories by which he proposed to be guided. Probably the effort exhausted him, or possibly he may have been trying since

to find out what his own theories really did mean, for so far as I can find out nothing more has been heard of him outside of the Fifth Book classes, which he occasionally visits. The teachers were much interested in Drawing, but their interest has waned during the period of Mr. O'Brien's masterly inactivity. The School Board very wisely agreed to let the schools be dismissed at 3 o'clock once a month to allow Mr. O'Brien to train the teachers in the work to be done the following month. He has never once called us together, and there are some who are cruel enough to insinuate that it is because he has learned by his attempts and failures in the Fifth Book classes, that he knows very little about elementary Drawing, and much less about teaching. It is rumored that he declined to act as an examiner in elementary Drawing at the Art School. I suppose he knew his lack of knowledge would be detected there. I admire his painting and wish our salaries were good enough to enable me to purchase some of his sketches, but I think that the fact that he is a great artist is in itself a sufficient reason to show that he is disqualified for public school work. If the School Board would spend the money they pay him in purchasing some of his pictures to hang in the schools, the pictures would do more teaching than he has done so far. Yours, &c.,

TORONTO TEACHER.

"EMPHASIS FIRST."—Said an old teacher: "When I first began to teach, I resolved never to use the rod. I had a delightful school, and was delighted with my work. But there was one boy, the son of a prominent citizen, quick to learn, if he choose, but lazy and addicted to playing truant. He had no very bad habits, and seemed to mean well. He could be melted to tears with a very few words, and made most earnestly to promise amendment, which promise he alway broke. His parents blamed the teacher for his slowness to learn, and his example demoralized the school. I have no doubt," said the teacher, "that boy was the means of my losing the situation. Some months after I visited my successor in the same school. It was in excellent order. That boy sat in his seat deep in his studies. I whispered his case to the teacher, and asked by what means he had reformed the fellow. He raised the lid of his desk, and pointed to a rattan, 'I gave him an emphatic moral lecture, put in the emphasis first,' said he, 'and the work was done. He is as steady and as bright as any in the school.'"

THE BEST AIDS TO DISCIPLINE.—1. Let the teacher teach well. 2. Let him teach order and system by being orderly and systematical himself. 3. Let him provide means to keep all profitably and pleasantly employed. 4. Let him secure the aid of parents and school boards, and work in harmony with them. 5. Let him be calm, watchful and firm. Above all, let him constantly study his profession; remember that, "to educate a child correctly requires deeper and profounder thought than to govern a State."—*Ed. Record.*

CASTOR OIL AS A DETERRENT.—Many persons have tastes which differ widely from those of humanity at large, but the consensus of opinion upon the subject of the extreme nastiness of castor oil may be regarded as universal. The school authorities of Lochgoilhead have utilized the aversion to this medicine by introducing it as a means of punishment, and children who have not properly prepared their lessons have been compelled to drink it out of a bottle. Such, at least was the statement of Dr. Cameron in his question to Mr. Mundella; and he added that the oil had habitually been used as a puuishment. Mr. Mundella, in his reply, said that the statement was correct; he found, however, that it had not been used as a punishment but as a deterrent. This is even worse. That a child should be punished for idleness by being made to drink castor oil is, as Mr. Mundella said, at once unwarrantable and reprehensible, but that a number of children should be obliged to drink it beforehand, to deter them from idleness, is a piece of revolting conduct which no Parliamentary words are capable of characterising. Henceforth Lochgoilhead will be known as a place where the brimstone and treacle *regime* of Dotheboys Hall is thrown into the shade, and where children are treated with a cruelty which far surpasses the sketch of the great novelist. We hope that an inquiry will be made, and that condign punishment will fall upon all who are found responsible for this treatment of children.—*London Standard.*

Special Articles.

THE STUDY OF SCIENCE.*

(Concluded from last month.)

The following account is taken from Warren's Introduction to Law Studies pp. 175, 176, London 1845, 2nd Ed.

Some two or three years ago a counsel, manifestly not having enjoyed a very superior education, was engaged in arguing a case, *in banco*, at Westminster—before four very able judges, one of them being a man remarkable for his logical acuteness and dexterity. "No, no,—*that* wont do," said he suddenly interposing—"put the converse of the proposition, Mr. ———: try it that way." The judge paused—the counsel paused, while a slight expression of uneasiness flitted over his features. He expected the *judge* to "put the converse for him:" but the judge did not. "*Put the converse of* the proposition, Mr. ———, and see if *that* will hold"—repeated the judge, with some surprise, and a little peremptoriness in his tone. But it was unpleasantly obvious that Mr. ——— could not "put the converse" of the proposition—not even understand what was meant. Some better-informed brother barrister whispered to him the converse of the proposition, but it was useless. Mr. ——— faltered, repeated a word or two, as if mechanically. "*Well!*" said the judge, kindly, suspecting the true state of the case,' "go on with your argument, Mr. ———.

The following narrative forms an interesting sequel to the preceding case:

"Some years ago, a young gentleman of superior natural talents, having had an average classical education, was, in his twenty-first year, desirous of going to the Bar. He had read much of what is called 'light literature,' but indolently and discursively; and even written not a little, nor unsuccessfully, for the press; and had several times found opportunities for speaking in public on political subjects; acquitting himself on such subjects, successfully—being fluent, ready, and ingenious. In short he had contrived to pass, among a pretty large circle of acquaintances, as '*a decidedly clever man.*' Some casual observation made by a Cambridge friend of his, concerning the use of Geometry in testing the strength of the reasoning powers, induced him on returning that evening to his lodgings, to take down a copy of Euclid, which he recollected had lain on one of the upper shelves of a book-case belonging to his landlord. After glancing over the definitions, axioms and postulates, he, in like manner, and '*in his then superficial way*'—read over the first problem, 'and saw nothing so *very* wonderful in it.' Some impulse or other moved him to read it again, and very attentively; that inducing him after a thoughtful pause to read it a third time, still more attentively than before. After this, he rose from his chair, 'in a sort of trepidation,' and felt that he had suddenly made a great discovery; namely that till then 'he had *really* known nothing whatever of the connection between premiss and conclusion,—in short, of real reasoning,'—and he passed a night of sleepless despondency. On the morrow, however, he betook himself to action; and, turning his discovery to good account, addressed himself immediately to the study of Euclid, overcoming a thousand risings of weariness, disgust and even despair, till he had mastered several books. Then he attacked Algebra; went to the University pretty well prepared, and acquired considerable distinction there.

"I never now," said he, "think of Euclid, who taught me first that I had an understanding which I could not use, and then showed me how to use it, withot feeling all the reverence and affection due to so august an instructor." I am conscious that he changed the whole character of my mind, and gave me my only chance of success in life. By the time that I had mastered the first three books, not with the design of becoming a Mathematician, but simply of learning *to reason*, I became sensible of a great improvement in my faculties, occasioning me unspeakable satisfaction, mingled with secret shame and vexation at the frivolous, indolent, and superficial habits of thought with which, up to the moment of discovering their existence, I had been content."

The following narrative of a conversation with Abraham Lincoln, late President of the United States of America, is not uninteresting:

* Extract from Preface to New Edition of Potts' Euclid, furnished through the kindness of Robert Potts, M.A., Cambridge, England, author of Potts' Euclid."

The Rev. John P. Gulliver said to Mr. Lincoln "I want very much to know how you got '*this unusual way of putting things.*' It must have been a matter of education. No man has it by nature alone. What has your education been?"

"Well," said Mr. Lincoln, "as to education, the newspapers are correct. I never went to school more than six months in my life. But, as you say, this must be a product of culture in some form, and I have been putting the question you ask me to myself, while you have been talking. I can say this, that, among my earliest recollections, I remember how, when a mere child, I used to get irritated when anybody talked to me in a way I could not understand. I don't think I ever got angry at anything else in my life. But that always disturbed my temper, and has ever since. I can remember going to my little bedroom, after hearing the neighbours talk of an evening with my father, and spending no small part of the night walking up and down, and trying to make out what was the exact meaning of some of their, to me, dark sayings. I could not sleep, though I often tried to, when I got on such a hunt after an idea, until I caught it, and when I thought I had got it, I was not satisfied, until I had repeated it over and over, until I had put it in language plain enough, as I thought, for any boy I knew to comprehend. This was a kind of passion with me, and it has stuck by me, for I am never easy now, when I am handling a thought, till I have bounded it north, and bounded it south, and bounded it east, and bound it west. Perhaps that accounts for the characteristic you observe in my speeches, though I never put the two things together before."

"Mr. Lincoln, I thank you for this. It is the most splendid educational fact I ever happened upon. This is *genius*, with all its impulsive, inspiring, dominating power over the mind of its possessor, developed by education into *talent*, with its uniformity, its permanence, and its disciplined strength, always ready, always available, never capricious—the highest possession of the human intellect. But let me ask, did you prepare for your profession?"

"O yes! I 'read law,' as the phrase is: that is, I became a lawyer's clerk in Springfield, and copied tedious documents, and picked up what I could of law in the intervals of other work. But your question reminds me of a bit of education I had, which I am bound in honesty to mention. In the course of my law-reading I constantly came upon the word *demonstrate*. I thought at first, that I understood its meaning, but soon became satisfied that I did not. I said to myself, 'what do I mean when I *demonstrate*, more than when I *reason* or *prove*?' How does demonstration differ from any other proof? I consulted Webster's Dictionary. That told of 'certain proof,' 'proof beyond possibility of doubt'; but I could form no idea what sort of proof that was. I thought a great many things were proved beyond the possibility of doubt, without recourse to any such extraordinary process of reasoning as I understood, 'demonstration' to be. I consulted all the dictionaries and books of reference I could find, but with no better results. You might as well have defined *blue* to a blind man. At last I said, 'Lincoln, you can never make a lawyer if you do not understand what *demonstrate* means; and I left my situation in Springfield, went home to my father's house, and stayed there till I could give any proposition in the six books of Euclid at sight. I then found out what 'demonstrate' means, and went back to my law studies."

I could not refrain from saying, in my admiration at such a development of character and genius combined:—

"Mr. Lincoln, your success is no longer a marvel. It is the legitimate result of adequate causes. You deserve it all, and a great deal more. If you will permit me, I would like to use this fact publicly. It will be most valuable to inciting our young men to that patient classical and mathematical culture which most minds absolutely require. No man can talk well unless he is able first of all to define to himself what he is talking about. Euclid, well studied, would free the world of half its calamities, by banishing half the nonsense which now deludes and curses it. I have often thought that Euclid would be one of the best books to put on the catalogue of the Tract Society, if they could only get the people to read it. It would be a means of grace."

"I think so," said he, laughing: "I vote for Euclid."—*From the Anglo-African, No. 6, Vol. IV.*

A boy was going up Sycamore Street yesterday with a glass inkstand to fill. Every few steps he would toss it into the air and catch it again. He did it successfully until the last time, when it landed gracefully on the pavement in a thousand pieces. As looked at it a minute and then said: "It serves the old man right. I told him before I started that I couldn't carry that thing up street."—*Oil City Derrick.*

SALARIES IN THE UNITED STATES.

Governor Butler thinks our male teachers are paid too high, and our female teachers too low salaries. We agree with him in the last clause of the statement, and shall expect him to use his influence in securing an increase to woman's wages in our public schools. His honesty in desiring to see our female teachers paid better salaries will probably appear in the special message on that subject, which we shall be glad to circulate as wide as possible all over our land, in all places where woman's work is held at too small value. Massachusetts pays her women 30.59 dollars per month; but what will Governor Butler say of those States where the average pay to women teachers is less than twenty dollars, and in some less than sixteen dollars per month? These are wrongs which should be righted, and to accomplish their overthrow the Governor has a Herculean task, but many well-wishers and helpers. But, says the Governor, "the salaries of the principals in most of the higher schools, teachers, and supervisors are very much more than they ought to be; or, to use other words to express my meaning, higher than other like business pays, and higher than the sum for which equally good services could be, and are, obtained." Here we beg to differ from His Excellency, because his opinion is unwarranted in fact, and is unsupported by argument. The principals of our high schools, and the superintendents of our public schools, represent, as a rule, the best scholarship, and the largest and ripest experience in the profession. Most of these men and women are college graduates, or have a liberal education equivalent to a college course of study. They are the exceptional men and women on whom devolve the greatest responsibilities, and the most delicate and arduous labours. Scholarship, teaching-tact, experience, professional success, are parts of the inventory of qualifications for the highest places in the profession, to secure which, years of toil, study, sacrifice, have been cheerfully rendered. As masters of our largest grammar and high schools, these men have reached mature life, have devoted all their years to the preparation for teaching and in teaching, and now have the instruction and discipline, sometimes of twenty schools with one thousand pupils,—often more; and this high position is acquired for the enormous salaries of from 1,200 dols. to 3,000 dols. a year. From this position, promotion is made to the superintendency, where the salaries range from 1,000 dols. to 4,000 dols. a year; the higher figures in each case being only exceptional in the whole country, the general average in both not exceeding 1,500 dols. a year. Now, we cannot believe that Governor Butler has the face to say that 1,500 dols. a year is too high a salary to be paid to the master or superintendent of our larger schools,—a salary probably less than half that paid his own private clerk, or the superintendent over some of his industrial interests of vastly less importance and with less labor, and would Governor Butler limit the income of the most talented and successful in our profession to a salary less than that paid the head cook at Parker's, or the chief clerk in the Fifth Avenue or the Grand Pacific?

"Upon what meat doth this our Cæsar feed,
That he is grown so great,"

that he may accumulate annually by hundreds of thousands, while he is unwilling to bestow the pittance of a livelihood upon those who are carrying the heavy burdens and doing the hard service of directing, advising, superintending school affairs,—of prime interest to the State?—*The New England Journal of Education.*

"WE LEARN TO DO BY DOING."

This statement admits of a two-fold interpretation. One is true, the other, false. It is not therefore a good aphorism, and should be avoided in a scientific discussion of the Art of Teaching.

Let us examine it. The statement is true, when interpreted to mean that a full and adequate knowledge of a process results only from an actual performance of the process so many times repeated as to make it familiar. In this case practice is seen to give clearness and distinctness to our theory.

Every process is a double-sided unity,—a knowing and a doing,—a theory and an art. The two are essentially one. Practice is the concrete phase of theory. The knowledge,—the succession of ideas that constitute the process,—is the essence of the process. The concrete, objective expression of those ideas is the objective phase of the subjective essence. It is educationally valuable because by this actual "doing" the knowing is more perfect. If the process is a physical one practice of it accustoms the muscles and nerves to a form of action corresponding to the ideas which direct the activity. A habit is formed; a memory is established in the physical organs, which results in skill in execution. A clear apprehension of the ideas involved in any process is knowledge of the process. In so far as the actual, objective execution of the process aids to make these ideas clear,—in other words, gives a clear knowledge of the theory,—thus far it is true that "we learn to do by doing."

But the statement is false when it is interpreted to mean that by merely doing we gain an adequate knowledge of the ideas involved in the process. What is learned by the doing merely, is a series of physical movements. These may or may not have an idea behind them. The real significance of these separate movements may or may not be seen. He who learns to do by doing remains ever the artisan. He is the bond slave of precedent. He can perform the particular process which he has learned, but he is without freedom in that performance. His process is the expression of a theory, but it is the theory of some one else, not his own. He can not interpret his own work. There are those who make frequent use of the injunction, "Learn to do by doing," who do not put any other meaning into it. Such persons can never really *learn to do by doing.*

But there is another class who put still another meaning into the phrase. They believe that the real thing to learn is the *theory* of the doing, and that the road by which this must be learned is by *practice* in the doing. So they set themselves, or if they happen to be teachers, they set their students to work to discover the theory by the way of the art. This is the method of nature they say; the method by which the race has discovered science.

I was reading recently a report of an intelligent visitor of a western normal school, which school is held by many to be the modern Mecca of all devout pedagogues. I judged from this report that in this school the students were "to learn to teach by teaching." So they are set to teaching for a certain length of time each day. At the end of that time they pass to another room and submit to criticism by that portion of the class who did not teach, but were watchful observers of the teaching done by the others. This criticism seemed for the most part pointless and of small significance. It could not well be otherwise, for want of a basis. An older member of the class who has seen some years' service as a teacher, criticised the critics for these aimless and baseless criticisms, which were made without any recognition of principles which should control the development of the lesson and form a standard by which to judge of it. To this the principal of the school promptly replied, "A good point and well taken, but my object is to have you learn these laws and principles by yourselves."—"You are to learn to do by doing," he said in another connection.

They are to learn the theory of teaching by groping in the dark for the ideas which compose it, unaided, except by the scintillations of light that may be thrown upon the chaos by experience and the example of others.

This interpretation of the phrase, "learn to do by doing," is at present a popular one. It is "following the order of nature";—it is the "method of science";—it is the "inductive method." Now any one of these catch phrases is potent above all argument. The method of science is the method *par eminence*, and to question its universal application is to stand athwart the path of progress and write one's self down a fogy.

But the earnest fogy believes that the truth must be told if the heavens fall. He dares to stand athwart the "path of progress," which is often but another name for the path of the hobby-rider, and call upon this rider to dismount and look and see how things appear when standing upon solid earth. The point of view greatly affects the appearance of a thing.

The "Scientific Method" is just now a hobby, and the number who are riding it or trying to mount it, inside and outside the schools, is legion. This method, as it is interpreted by these "reformers," is that every learner of any art or science must follow the method which the human race has followed in the construction of that art of science. The race groped for generations constructing first the art, and after a much longer period the science or true interpretation of the art. It is held that each individual must in like manner grope for a corresponding number of years of his natural life in a similar way in order to come by a knowledge of what the human mind has thus constructed. It is claimed that this groping is a strengthening process, developing the power of independent thought and preparing the way for independent action.

But it would be a sad reflection to conclude that the experience of the race is to be of no help to me; that this great inheritance of knowledge which I have thought to be my birth-right is really of no value to me. That for any purposes of culture, I might as well have lived in pre-historic times as now. There is no ground for the assumption that I must follow the same process in learning that the race pursued in constructing. If so I must needs come through Alchemy to Chemistry, and Astrology to Astronomy, and Paganism to Christianity. It is a principle of growth that all organisms grow by exercise, and the assimilation of nutriment. But is it not probable that there has been improvement in the nutriment and exercise of the spiritual powers, as well as in the exercise and nutriment of the physical organism? We do not learn what to eat by going through the experience of the race in the preparation of food. There is no valid reason why I must learn what the race has found out in the realm of thought, by following the process by which they found it out. The chief requisite is that the two prime conditions of growth be realized, viz., exercise and proper nutriment. The application of this plain truth to the education of teachers requires that the laws and principles which form the science of teaching, in so far as they have been discovered, be used as a basis of criticism from the start. This is the intellectual inheritance of every teacher, into the possession of which he should be allowed to enter at once. His first business is to learn what others before him have discovered. This he can do most rapidly and truly by a practical and conscientious application of these principles for its basis;—and by observation and criticism of the work by others. In this practice we shall find both the needed exercise and nutriment for a satisfactory growth in knowledge, and a great saving of energy which otherwise runs to waste in vain processes and needless emotional excitation. The critic of the critics was right. It is at too great a cost that the pupil-teacher "learns the principles of teaching himself." He has a right to be helped to these, and thus be helped to form a standard of criticism for his and others' work. There is an inexhaustible field for original activity in

the varied application of these principles in the practice schools. After the student has found out what is already known he is prepared for original investigation and discovery. Not before.—*President, G. P. Brown, in Indiana School Journal.*

"ENGLISH AS SHE IS WROTE."*

I.—BY THE INACCURATE.

In the account of an inaugural ceremony it was asserted that "the procession was very fine, and nearly two miles long, as was also the report of Dr. Perry, the chaplain."

A Western paper says: "A child was run over by a wagon three years old, and cross-eyed, with pantalets on, which never spoke afterward."

Here is some descriptive evidence of personal peculiarities:

"A fellow was arrested with short hair."

"I saw a man digging a well with a Roman nose."

"A house was built by a mason of brown stone."

"Wanted—A room by two gentlemen thirty feet long and twenty feet wide.

"A man from Africa called to pay his compliments tall and dark-complexioned."

"I perceived that it had been scoured with half an eye."

A sea-captain once asserted that his "vessel was beautifully painted with a tall mast."

In an account of travels we are assured that "a pearl was found by a sailor in a shell."

A bill presented to a farmer ran thus: "To hanging two barn doors and myself, 4*s.* 6*d.*"

A store-keeper assures his customers that "the longest time and easiest terms are given by any other house in the city."

Here is a curious evidence of philanthropy: "A wealthy gentleman will adopt a little boy with a small family."

A parochial report states that "the town farmhouse and almshouse have been carried on the past year to our reasonable satisfaction, especially the almshouse, at which there have been an unusual amount of sickness and three deaths."

A Kansas paper thus ends a marriage notice: "The couple left for the East on the night train where they will reside."

In the account of a shipwreck we find the following: "The captain swam ashore. So did the chambermaid; she was insured for a large sum and loaded with pig-iron."

II.—BY CORRESPONDENTS.

From an Indian school-boy:

"Benevolent Sir: The wolf of sickness has laid hold on the flock of my health."

From an Indian clerk:

"Sir. Being afflicted to the stomach and vomiteng I am sorry I cannot attend to office to-day."

From a Canadian lady to eligible gentleman:

"Dear Mr. B. I, Mrs. Wigston, wish you would call on my daughter Amelia. She is very amusing and is a regular young flirt. She can sing like a hunny bee and her papa can play on the fiddle nicely and we might have a rare ho-down. Amelia is highly educated, she can dance like a grass-hoper looking for grub and she can meke beautiful bread, it tastes just like hunny bees bread and for pumpkin pies she can't be beat. In fact she's ahead of all F girls and will make a good wife for any man.

"Yours truly

"Mrs. Wigston.

"Bring your brother."

III.—BY THE EFFUSIVE.

Professor Huxley is credited with the assertion that the primrose is "a corollifloral dicotyledonous exogen, with a monopetalous corolla and a central placenta."

A reporter with a large imagination, writing about the decoration of a church at a fashionable wedding in this city, said that "the church was ensconsed in flowers."

A scientific writer defines sneezing as "a phenomenon provoked either by an excitation brought to bear on the nasal membrane or by a sudden shock of the sun's rays on the membranes of the eye. This peripheral irritation is transmitted by the trifacial nerve to the Gasserian ganglion, whence it passes by a commissure to an agglomeration of globules in the medulla oblongata or in the protuberance; from this point, by a series of numerous reflex and complicated acts, it is transformed by the mediation of the spinal cord into a centrifugal excitation which radiates outward by means of the spinal nerves to the expiratory muscles."

The school committee in Massachusetts recommend exercises in English composition in these terms:

"Next the pleasure that pervades the corridors of the soul when it is entranced by the whiling witchery that presides over it consequent upon the almost divine productions of Mozart, Haydn, and Handel, whether these are executed by magician concert parts in deep and matured melody from artistic modulated intonations of the finely cultured human voice, or played by some fairy-fingered musician upon the trembling strings of the harp or piano, comes the charming delights we experience from the mastery of English prose, and the spell-binding wizards of song who by their art of divination through their magic wand, the pen, have transformed scenes hitherto unknown and made them as immortal as those spots of the Orient and mountain haunts of the gods, whether of sunny Italy or of tuneful, heroic Greece."

* From "English as She is Wrote," a little work published by George Routledge & Sons.

NORMALS—WHO OUGHT TO ATTEND?

I answer that I do not believe that any person who expects to teach a term of school can afford to lose the benefit to be derived from attendance at the Institute when it is brought within convenient reach.

This applies to both old and young teachers, but for different reasons.

The teacher with little or no experience needs to learn first that there is a difference between learning and teaching. To him the Institute opens a new line of ideas.

It shows him how to look from the standpoint of the teacher at the same subjects which he has hitherto considered only from the standpoint of the learner.

How to teach, is made more prominent than how to learn, or what to learn.

It would be a wonderful benefit to the schools of our country if all our young teachers could attend at least three Institutes before attempting to teach. That would give them time to think over methods of teaching and principles of school management, and in that way to become better qualified for the work when they begin. There would be fewer failures in government and methods.

The older and more experienced teacher needs to attend for two reasons. First, because the Institute needs him. It needs his experience, and he can be of great help to those with less experience; secondly, because it will improve his own work. He is liable to fall into ruts, and unless occasionally stirred up he is apt to fall behind the times.—*Central School Journal.*

Examination Questions.

GRAMMAR.

[The questions are the ones used for the past ten years, 1874-83 in the examination of the boys of the grammar schools of N. Y. City.]

1. Of what does syntax treat? What is the subject of a sentence? What are the principal parts of a verb? Why called *principal* parts? Define an irregular verb.

2. Arrange in tabular form the principal parts of the verbs cost, hang, plead, slink, set, shine, forbear, spit, thrive, shear. If any of these are regularly formed, indicate this by capital R, as in the grammars.

3. Give a synopsis of the verb *strike* in the second person, singular, of the tenses of the indicative and potential moods, solemn or ancient style.

4. Parse the italicized words in the following sentence: "The illustrated *library* of travel, exploration and adventure has been the *means* of furnishing the *public* with much information *bearing* upon the geography, history and *customs* of distant and partially *unknown* countries."

5. Correct the errors in the following sentences, and give the rules of syntax violated:

(*a*) The whole need not a physician, but them that are sick.
(*b*) Will you tell me who you take me to be?
(*c*) Nobody will ever entrust themselves to that boat again.
(*d*) If you can wait till to-morrow, I will consider of it.
(*e*) The richness of their arms and apparel were conspicuous.

6. What is the difference between a preposition and a conjunction, and between an adjective and an adverb? Make one sentence containining these four parts of speech, and write under each example, prep., conj., adj., adv., as the case may be.

7. Define an active verb, a passive verb. Make a short sentence in which both forms are used.

8. How is the plural of nouns regularly formed? Name at least five plurals that are exceptions to this rule.

9. In how many ways may the word *that* be used as a part of speech, and what are they? Make very short sentences illustrating the various uses of the words.

10. State the difference between a conjunctive adverb and a conjunction. Make a sentence showing the proper use of a conjunctive adverb.

11. In how many and what ways may the plural of nouns be formed? Give an example of each.

12. What is the difference between a pronoun and a pronominal adjective? Write a short sentence of not less than two lines introducing an example of each of these parts of speech.

13. In what ways can the gender of nouns be expressed? Give two examples of each of the different modes.

14. What is the infinitive mood? In how many and what ways can it be used in a sentence?

15. Parse the following words in italics:

From scenes like *these* old Scotia's grandeur springs,
That makes her loved at home, *revered* abroad;
Princes and lords are *but* the breath of kings,
"An honest *man's* the noblest work of God."

16. Construct a complex sentence, one member of which must contain an adverbial phrase.

17. Write a synopsis of the verb "strike" in the second person singular of all the tenses in the active voice, ancient or solemn style. Arrange this neatly, naming the tenses and moods in order.

18. Correct the errors in the following sentences, and give the reasons for the corrections:

(*a*). Gravitation is where one body attracts another.
(*b*) Henry is not tall like I am.
(*c*) If you will go I will pay thy expenses.
(*d*) Whether or no this is the man which committed the burglary is uncertain.
(*e*) Nearly a thousand head of cattle was transported over the road.

19. Analyze the following sentence: The most mischievous liars are those that keep on the verge of truth.

20. What is meant by the "principal parts" of a verb? Give the principal part of "wring, catch, forsake, go, speak, swim, lend."

21. In how many and what ways is gender expressed in English? Give three examples of each mode of formation.

22. How are adjectives regularly compared? Give four examples of irregular comparison.

23. Parse the words in italics in the following lines:

"On parent's knees, a naked, *new-born child.*
Weeping, thou *sat'st* while all around thee smiled;
So *live* that, sinking in thy last long sleep,
Thou then may'st smile, *while* all around thee weep."

24. Analyze the last two lines of the preceding stanza.

25. What is a finite verb?
Make a sentence of at least twelve words, containing a finite verb, and underline the verb.
What is the infinitive mood?
Make a sentence of at least twelve words, containing a verb in the infinitive mood, and underline the infinitive.

26. What is a defective verb?
Give an example.
What is a passive verb?
Give an example.
What is a compound active verb?
Give an example.
What is the difference between an intransitive and a passive verb?

27. Correct the errors in the following sentences:
We sorrow not as them that have no hope.
Notice is hereby given to every person to pay their taxes.
If we have any victuals left, we will help you eat it.
That is a better furnished room than any in the house.
Washington was given the command of a division.

28. Construct a complex sentence of not less than twenty-five words, and underline all the words of the dependent clause.

29. Give a definition of a sentence, and also of its subject and predicate.

30. State what is meant by an active verb; what by a passive verb. Illustrate by a sentence containing both forms.

31. Give synopsis (second person singular), of the active voice of an English verb (to strike).

32. In how many ways is gender expressed in English? Give an example of each.

33. How is the plural of nouns formed in English? Give one example of each way.

34. Give principal parts of the verbs fall, know, begin, fly, strike, shine.

35. Parse the italicized words in the following passage:
About him *exercised* heroic games
The *unarmed youth* of heaven. But o'er *their* heads Celestial *armory*, shield, helm, and *spear*,
Hung bright, with diamond *flaming*, and with gold.

36. Correct the errors in the following sentences, and give the reason for each correction:

(*a*) He that cometh unto me, I will in no wise cast out.
(*b*) The train of our ideas are often interrupted.
(*c*) Of all their ill habits idleness is the most incorrigible.
(*d*) He acted much wiser than his neighbors.
(*e*) If he is but discreet, he will succeed.

37. Analyze the sentence:

"Who could guess
If evermore should meet those natural eyes,
Since upon night so sweet such awful morn could rise?"

38. Parse the following words in italics:

"*Romans*, countrymen, and lovers! hear me for my cause, and be *silent* that you may hear; *believe* me for mine honor, and have respect unto mine honor, that you may believe; censure me in your wisdom, and awake your senses that you may the *better judge.*"

39. Analyze the sentence:

"Pray for the living in whose heart
The struggle between right and wrong,
Is raging terrible and strong."

40. Parse the following words in italics :

"I seem to *have been* only like a *boy* playing on the sea-shore, and diverting myself in now and then *finding* a smoother pebble or a prettier shell than ordinary, *whilst* the great ocean of truth lay all *undiscovered* before me."

41. Write the following sentences with the errors corrected ; and give the reasons for such corrections :

(*a*) What signifies fair words without charitable deeds ?
(*b*) The next New-year's day, I shall be at school a year.
(*c*) You may choose either of these three books on the table.
(*d*) Send the multitude away that it may go and buy itself food.
(*e*) The carpenter performed the work agreeable to his promise.

42. Analyze the following sentence :

"The most singular fact of all is that he should have allowed himself under the circumstances, to be so deceived."

43. Parse the words italicized in the sentence :

"Anger is a *thing that* those who live under us *suffer* more from *than those* who live with us.

44. Analyze the following sentence :

"In a moment, ten *thousand* persons, who crowded the great hall, replied with a *still* louder shout, which made the old oaken roof *crack;* and in another moment, the innumerable throng *without* set up a third huzza, which *was* heard at Temple Bar.

45. Parse the words italicized in sentence 54.

46. Correct the following, giving in every case the reason for the correction :

(*a*) "I cannot tell who to compare them to."
(*b*) "Write upon your slates a list of the ten first nouns."
(*c*) "Everybody trembled for themselves or their friends."
(*d*) "The mechanism of clocks and watches were wholly unknown."
(*e*) "Either a pestilence or a famine, a victory or a defeat, an oracle of the gods or the eloquence of a daring leader, were sufficient to impel the Gothic arms."

47. (*a*) Which of the parts of speech have modifications ?
(*b*) What are moods ?
(*c*) What is an irregular verb ? Give an example.
(*d*) What is the difference between a participial adjective and a participle ?
(*e*) What is a complex sentence ?

48. Analyze the sentence :

"But *when* thou doest alms, *let* not thy left hand *know what* thy right hand *doeth.*"

49. Parse the words italicized in the foregoing sentence.

50. (*a*) Construct a complex declarative sentence :—subject, *Winter.*
(*b*) Construct a compound sentence :—subject, *The Telegraph.*
(*c*) Construct an interrogative sentence of not less than ten words.

51. Correct the following sentences, and give in each case the reason for correction :

(*a*) The whole need not a physician, but them that are sick.
(*b*) Each of which have stamped their own impress on the character of the people.
(*c*) In depicting of character this writer is little better than a mannerist.
(*d*) We will send either of those three books on payment of the advertised price.
(*e*) I am afraid of the man dying before the doctor can come.

52. What is a participle ? a participial adjective ? a participial noun ? a clause ? a sentence ?

53. Construct a sentence containing not less than twenty words, under each of the three following heads—*a, b, c :*

(*a*) A complex interrogative sentence with an object clause ; choose one of the three subjects : High Bridge, Broadway, Brooklyn.
(*b*) A complex declarative sentence with an object clause ; choose one of the three subjects : patriotism, obedience, honesty.
(*c*) A compound declarative sentence with an adjective clause in both members ; choose one of the three subjects : Columbus, Washington, Lincoln.

54. Analyze,

Under a spreading chestnut tree
The village smithy stands ;
The smith, a mighty man is he,
With large and sinewy hands ;
And the muscles of his brawny arms
Are strong as iron bands.

55. Parse, *smith, he, under, as* and *bands.*

56. Correct the errors (if any) in the following sentences, and give the reasons for such corrections :

(*a*) The crowd was so great that the judges with difficulty made their way through them.
(*b*) Good order in our affairs, not mean saving, produce great profits to those who use them.
(*c*) He is like a beast of prey who destroys without pity.
(*d*) He would not be persuaded but what I was greatly in fault.
(*e*) I came to see you because I knew you was my old master's friend.

57. In how many ways may "*that*" be used as a part of speech ? Form separate sentences illustrating the different uses of "*that.*"

58. (*a*) Reconstruct and correct the following :

maximim for that was his Name though born on the Territories of the Empire descended from a Mixed Race of Barbarians his father was a goth and his Mother of the nation of alani.

(*b*) When corrected and reconstructed, analyze your work to prove its correctness, giving only the subjects, predicates and modifiers in the simplest manner, and stating the kind of sentences you have constructed.
(*c*) Parse the subjects and predicates for the purpose of ascertaining their agreement.

59. (*a*) Change the third person singular, present indicative active of the verb "*bring*" to the passive form.
(*b*) Give the perfect infinitive of the verb "*come.*"
(*c*) Give the third person pluperfect indicative active of the verb "*go.*"
(*d*) Give the second person plural of pluperfect indicative passive of the verb "*raise.*"

60. "'*Have* I no *friend?*' *quoth* he." Parse the italicized words.

61. Construct a simple sentence from the following propositions. (Notice that the main proposition is the fourth :)

(*a*) I believe Thomas to be my friend.
(*b*) I depended on him for help.
(*c*) I had no anxiety for the future.
(*d*) I left my home for America.
(*e*) I left in the month of June, 1860.

62. Correct the errors in the following sentences and give a reason for each correction.

(*a*) He indeed, would be a useful policeman, that should detect all the rogues that were found in every part of the city.
(*b*) I am the man that has protected thine infancy and have ever loved thee with parental affection.
(*c*) There is no other measure here than this ten feet pole.
(*d*) We could neither find the place nor the persons by whom the goods had been concealed.
(*e*) With the return of spring came four martins, who were evidently the same which had been bred under those eaves the previous year.—*N. Y. School Journal.*

BRAINS OR BRICKS.—"Let us put less money in great schoolhouses and more in the salaries of teachers. Smaller schools and more teachers, less machinery and more personal influence, will bring forth fruits higher and better than any we have yet seen." There is practical wisdom in these words of Garfield which the American people would do well to heed. There is no doubt that the tendency of our school system is too much in the direction of brick and mortar. We seem to be in danger of forgetting that brain and heart are of far more value in education than brick and mortar. More and better teachers, with better pay, are the greatest need of the hour.—*Ohio Ed. Monthly.*

Practical Department.

TOPICAL SPELLING.

1. Direct the whole school to write on their slates fifteen names of objects they can see in the school-room. The first one who has the requisite number raises his hand, and is then requested to copy his list on the black-board. As soon as this is done, the whole school rise, turn their backs to the board and spell the words from the board, dictated by the teacher or the pupil. When this is finished, the teacher calls upon the school to raise their hands if they have any words on their slates *not* on the board. The teacher points to each one who spells his additional words. In this way, in a few minutes, every object in the school-room is spelled by the whole school; difficult words are noted, and the whole school is *educated* in spelling, so far as the school-room is concerned.

2. For the next exercise, let them rise from their seats, look out of the windows five minutes, by your watch, and then spell everything they can see. Drill them on difficult words.

3. Give them for topics everything they saw on the way to school; everything they can see in a store of goods; everything on the dinner-table; names of all kinds of cloth; all the parts of a wagon and harness; names of quadrupeds, birds, reptiles, fishes, insects, shells, garden vegetables, flowers, trees, fruits, metals, rocks, and minerals.

4. Let them write the name of every object made of iron, or that has any iron about it; also, everything made of wood. A live teacher can draw out of pupils an immense number of words from the foregoing subjects.

5. Let them write the names of the capitols of the different States in the Union; also, of different countries of the globe.

6. Let them write the names of all the persons living in the school district.

7. Let them write the names of the days of the week, and of the months.

8. Let them write the names of the parts of an apple, a ship, or a house, different kinds of food, and names of different trades.

9. Let them write a list of all the persons necessary to make a loaf of bread, commencing with the felling of trees in the forest. It is said that one thousand different occupations are involved in making a loaf of bread. Let them see how many they can write.

10. For an occasional exercise, let the first pupil in an advanced class spell the name of some town or city, and then let the next mention the name of a town whose first letter is the same as the last letter of the name just spelled. If a scholar fails to do this, he is seated at once.

11. Make the whole school rise, and as soon as any scholar can mention the name of a town in the State, he raises his hand. The teacher asks him to spell it, and he is then seated. When the class are all seated, they rise and repeat the exercise, with a new list of words.

12. Tell a class to spell, for their next lesson, all the words they can think of, commencing with the letter A. Go on this way through the alphabet.

13. Tell small scholars to spell, for their next lesson, as many words as they can think of which contain but one syllable. Go on through the different grades of words by syllables.

14. Give them some familiar work for a subject, and tell them to write on their slates everything they can think of about it, and then make them spell the words in the order in which they have written them. This is an excellent introduction to the writing of compositions, though the teacher should not be so unwise as to call them such.

15. Dictate to a class ten words difficult to spell, and see how many will write them correctly on their slates.—*Teacher's Manual, No. 1.*

NOTE.—Teachers who desire to see a school text aiding the teaching of spelling as above, would do well to examine Gage's Practical Speller.—[ED. SCHOOL JOURNAL.

TOPICAL EXERCISES.

The term "topical exercises" is used by some teachers to cover "talk" by pupils. The former term is not very clear, and the term "pupil talks" is much more descriptive of the facts.

Each pupil, even the youngest, selects some theme, and when called on, either at his seat or on the platform, states his thoughts in the best manner possible. The teacher should keep a book, and in one column put a list of subjects, and opposite in another column, let the pupil put his name and the date when he selected it. The same may be taken by a second pupil three weeks afterward. In this book the teacher should gather subjects for talks. They should be classified under Literary, Biographical, Historical, Geographical, Scientific, Humorous Anecdotes, etc.

The pupil generally selects his own subjects, but he may be assisted. He then looks in some cyclopedia for his materials. I encouraged the use of scrap-books, and so all of my pupils made scrap-books. They selected from these books things that suited them and told them in their own words. In this case the subject goes into the "Subject-book," and the scrap-book is referred to with page, etc., so that any one else can get the same information at another time.

This plan secures two results: (1) It gives the pupils power to describe. (2) It increases the stock of general knowledge wonderfully. No talk is over a minute long, usually, but some are two and even three minutes. In a school of 40 pupils, during the year, there are 130 biographies, 30 battles, 20 literary, 200 stories, 80 humorous, 300 geographical, 117 scientific, and 20 local. This is an average of about five per day. The "local" referred to was concerning the town, people, manufactures, etc.

In given these "talks" the pupil should stand in a natural attitude and speak naturally and easily. At first there will be diffidence and awkwardness; these will disappear by practice.—*N. Y. School Journal.*

METHODS OF TEACHING READING.

On Thursday, the 7th inst., a lecture on the above subject was given by Mr. J. B. Rundell (Gunnersbury) to a gathering of school teachers at the Chiswick Glebe Board School. He said that the art, which all must now acquire, was almost invariably taught in a way which over-burdened a child's memory, confused a naturally bright intelligence, and hopelessly stupefied and discouraged children who were naturally dull and backward. The reason of all this was no other than the idea, of which few people appear able to disburthen themselves, that to spell—*i.e.* to pronounce the ordinary names of the letters which make up any given word—was a guide to a child who had to sound the word as a whole. It seemed part and parcel of the order of things that a teacher shall repeat to a child who is beginning to learn to read such utterly irrelevant sounds as *see, ay, tee,* cat; *dee, owe, jer,* dog; *see, owe, double-you,* cow! Writers on education, from the time of Miss Edgeworth, and long before, had called attention to this absurdity, but the genius of misrule was nearly as prevalent as ever. In 1844 appeared a Phonic Reading-book, in two parts, published under the authority of the Lords of the Committee of Council on Education, in which a mode of teaching reading, better than that in ordinary use, was explained. The dead-weight of resistance on the part of teachers and school managers proved, however, too great, and the effort to bring the book into general use was abandoned. And at the present time, in spite of the progress which education had made in many respects, in the matter of the first steps of teaching reading we were very much as we were fifty years ago. A remedy would be very speedily found, Mr. Rundell contended, if people would

only grasp the idea that, with a language so irregularly spelt as English is, the problems of teaching to read and teaching to spell should be treated separately, and a child should not be called upon to spell at all until he or she was able to read with fluency. As Her Majesty's inspector would not tolerate any liberties being taken with the mode of spelling now current, reading-books in phonetic spelling were at present out of the question, and teachers wishing to adopt a better mode of teaching reading had to be content with the "phonic" system, which retained the ordinary spelling, but, by means of italics and accents, gave a workable approximation to the sound of the spoken word. Mr. Rundell then explained Robinson's phonic method, which is largely adopted with excellent result in many elementary schools under inspection in the North of England, epecially at Leeds.—*School Guardian (Eng.)*

PROMOTIONS.

We wish now to notice what we fear to be a growing evil in the schools of the day. Pupils are often advanced from one grade to another before they have done their work well, just as in the country they are advanced from one book to another without careful preparation. If parents and pupils knew that superintendents would promote only such scholars as did good work, many absences and tardy marks which we now have would be wanting and there would be general attention to business which would save a deal of trouble. It is the listless and vicious in a school-room who are generally behind, and when once they have acquired the idea that somehow they are going to pass along with their class, they will find plenty of time and opportunity to exercise those vicious traits. To let them slide along easily is not only unjust to the scholar, but also to the teacher who has to take them. It is not pleasant for a superintendent to say to a pupil "you cannot be promoted" and it sometimes brings on a storm of abuse from parents. If a teacher consults only his own ease, and wishes to get rid of some bad boy or girl, he may try to make it seem best to pass him along, but no such reason should ever take the place of a governing motive. We know it to be true that the intellectual leaders of our classes, are not our cases of discipline; that fact alone ought to forbid any prize being put upon school wickedness by promotion. You could hardly find such a thing as a boy who had no feeling on the subject of being dropped from a class be he ever so ugly, and so it would do him good morally as well as intellectually to hold him closely to the work, for he would find less time to practise his evil propensities, and at the same time would be laying up a store of facts, which would help to make a man of him.

There is no law in any school which compels all scholars without regard to age, ability or bodily health to complete a certain course in a certain time, but there ought to be one that says a certain work must be complete before attempting anything higher. Should there be pupils, who from any cause, cannot take the course prescribed, let them do part of the work at once and consume a longer time in this preparation. A teacher can make it appear to a class and to a scholar and parent that it is wise to do so; show them how "the battle is not always to the strong nor the race to the swift," and so make them happy and contended in believing the true adage to be, "not how much but how well." In every class there may be scholars who are brighter than the majority and able to comprehend the lessons allotted from day to day and have time to spare.

To such a wise selection of reading, matters would be of untold value. A general taste for good reading fostered in our schools would soon cripple those firms who send about their immoral story literature.—*The Moderator.*

BAD LIGHT FOR THE EYES.

After a thorough examination of all the class-rooms in every section of the city of Philadelphia, it was discovered that in only 200 out of 2109 rooms in the public school buildings of the thirty-one sections are pupils properly seated. In his report to the Board upon this important subject, Supt. McAlister says:—

It has been ascertained that a considerable number of the seats are so placed that the light falls directly upon the eyes of the pupils. The injurious effects of this are so well established that no word of comment is needed. The accompanying table contains a detailed statement of the position of the desks in every class room in the public schools in the city, except the Boys' High School and the Girls' Normal School. It will be seen from it that in 378 rooms the desks and seats are so placed that all the light received by the pupils comes from the windows directly in front of them. In 422 rooms the light comes partly from the front and partly from the right or left side. Pupils cannot sit in such positions for the length of time required of them without permanent injury to their eyesight. In only 202 rooms out of a total of 2109 are the pupils placed in accordance with the requirements of hygienic science.

In the same connection, Mr. A. M. Spangler, of the Philadelphia Board of Education, after examining seventy-six of the public schools of the city, says, in the extended report of his investigations, that 14 per cent. of the girls and 8½ per cent. of the boys in the secondary schools are near-sighted, while in the primary schools 8 per cent. of the girls and 5 per cent. of the boys are afflicted in the same manner. The causes of the infirmity are set forth at great length in this report. In 95 per cent. of the schools visited the seating is wretchedly bad. He found in the front room children shielding their eyes with slates and books and desk lids from the glare that came through the blindless windows. Where this was prevented by shades or newspapers pinned up, a dim twilight pervaded these rooms. In the rear rooms the gas had to be lighted. Another cause of the prevalence of myopia is the location of blackboards. In the schools examined all the boards in front of the children are hung between two windows, "and as a consequence," says Mr. Spangler, "a knowledge of what is written on them can only be learned by a straining of the eyes that can not be otherwise that hurtful in the extreme." The remainder of the boards are hung on one side, necessitating a change of position whenever the children must consult them. In 95 per cent. of the school-rooms Mr. Spangler found the only means of ventilation to be by opening doors and windows. The result of these investigations should set teachers and school officers to thinking, and to making intelligent inquiry and observation, in all parts of the State.

HOW FAR SHALL I HELP THE PUPIL?

BY D. P. PAGE.

It is always a very difficult question for the teacher to settle, "How far shall I help the pupil, and how far shall the pupil be required to help himself?" The teaching of nature would seem to indicate that the pupil should be taught mainly to depend on his own resources. This, too, I think, is the teaching of common sense. Whatever is learned should be so thoroughly learned that the next and higher step may be comparatively easy. And the teacher should always enquire when he is about to dismiss one subject, whether the class understands it so well that they can go on to the next. He may, indeed, sometimes give a word of suggestion during the preparation of a lesson, and by a seasonable hint save the scholar the needless loss of much time.

But it is a very great evil if the pupils acquire the habit of running to the teacher as soon as a slight difficulty presents itself to request him to remove it. Some teachers, when this happens, will send the scholar to his seat with a reproof, perhaps, while others,

with a mistaken kindness, will answer the question or solve the problem themselves, as the shortest way of getting rid of it. Both these courses are generally wrong. The inquirer should never be frowned upon; this may discourage him. He should not be relieved from labor, as this will diminish his self-reliance without enlightening him, for whatever is done for a scholar without his having studied closely upon it himself, makes but a feeble impression upon him, and is soon forgotten.

The true way is, neither discourage inquiry nor answer the question. Converse with the scholar a little as to the principles involved in the question: refer him to principles which he has before learned and now lost sight of; perhaps call his attention to some rule or explanation before given to the class; go just so far as to enlighten him a little, and *put him on the scent*, then leave him to achieve the victory himself. There is a great satisfaction in discovering a difficult thing for one's self, and the teacher does the scholar a lasting injury who takes this pleasure from him. The teacher should be simply suggestive, but should never take the glory of a victory from the scholar by doing his work for him, at least not until he has given it a thorough trial himself.—*The Teacher.*

HOW WILL THEY DEVELOP?

Many a teacher has stood before his school and felt a sadness steal over him that he could in no way resist. There are great powers and capacities existing in yonder boy, there are wonderful possibilities in yonder child. Those two who sit side by side; what will be their future?

Look back ten years, teacher, and do you not feel sore at heart? You did your best, God knows, but why did James ——, a very pleasing, interesting boy, take first to tobacco, then to beer, then to whisky, so that now when you meet him he wears the look of a hardened criminal? You cannot answer; you wish he was once more in the pleasant state he then was. You would like to try your power again.

The truth may be stated as follows: every individual at some time stands where two ways diverge—one is the right and the other is the wrong way. To cause to choose the right path should be the effort of the teacher. Deep impressions cause this choice to become a habit. Hence the effort to fix deep impressions in the heart. Fix earnestness as a trait of the character. They will develop; if they develop with earnest purposes, then you need not fear.—*N. Y. School Journal.*

HYGIENE.

I.

1. Hygiene for the teacher:
   - *a.* The teacher's liabilities to ill-health.
   - *b.* Overwork.
   - *c.* Anxiety.
   - *d.* Care of his diet, rest, sleep.
2. Hygienic observations concerning the school-house and grounds.
   - *a.* The teacher should visit the house before commencing school.
   - *b.* He should notice drainage, decaying matter, the outbuildings, the well, etc.
   - *c.* The lighting of the school-room.
   - *d.* The heating of the school-room.
   - *e.* The ventilation of the school-room.
   - *f.* The arrangement and condition of the seats and desks.

II.

1. Hygienic law applied to the pupil:
   - *a.* Position of pupils in seats; in school-room.
   - *b.* Variety required.
   - *c.* Recesses.
   - *d.* Use of eyes.
   - *e.* Sitting in drafts; by hot stoves.
   - *f.* Care of clothing.
   - *g.* Care of person.
   - *h.* Contagious diseases; rules to be observed.
   - *i.* Amount of work to be required of pupils.
   - *j.* Temperance; (1) moderation in right things, (2) abstinence from harmful things.
   - *k.* Athletic sports.
   - *l.* The *will* to be trained to obey hygienic law.

—*From Outline of Institute Work (Ind.)*

PRACTICAL TEACHING.

I fear we are not practical enough. We lay too much stress on grammar, arithmetic and geography as we find them in our text books, and spend too little time on general knowledge; less text book work in that line, and more that shall tend to symmetrical development of the heart, the head and the hand would give more useful men and women. It would be much more advantageous to a boy or girl to understand the principles of the telegraph, steam engine, telephone and the like, than to know how to solve intricate problems in arithmetic or algebra. Better for them to know how to correct language incorrectly used, and express themselves with elegance and ease than be versed in difficult analysis and parsing. Better for them to understand reasons for the different states of our atmosphere, causes for changes in climate, the relation of countries and governments to one another, than to be studying the almost unending local geography in its minutiæ as given in our books. Better for them to know about the government of their own town, county, and country, than to learn the hundreds of small bays, rivers and places that they are required to learn. Better for them to know something about the law of animal and vegetable life, and especially their own bodies, than the careless repetition of rules and definitions, that will never enter into practical life.—*The Moderator.*

UNQUALIFIED TEACHERS.

It would astonish you to know how many teachers there are in this State (Tenn.) who are without an educational journal or book, or who have never attended a normal school or teachers' institute, or had any preparation whatever.

The above was addressed to an editor of a school journal. The writer did not see from the standpoint of a publisher of a school paper. Tennessee is not so much behind. Our experience for the past three years has been a continual surprise to us. If you wish to find a verification of the above, work a while among the teachers of any State. An intelligent man was in our office a few days since and said "If I should divulge to the public all I know with regard to the real lack of preparation of teachers to keep abreast of the times, I would be driven from the city. This may be an extreme view, but you doubting ones, take one hundred papers of the average examination, in any county in the State, and if you are not satisfied you are past conversion and "will be given over to hardness of heart that you may believe a lie."

A member of an examining board said to us only a few days ago, that there was not a minister in the State that possessed grace enough to patiently examine one hundred papers of so many candi-

dates for a third grade certificate. If teachers were seeking helps through books and papers, could these things be so?

We are glad to say that there are better omens in the sky. "The mills of the gods grind slow"—but they are grinding. The people are waking up to the needs of the hour—and the future teachers will have to use the teacher's tools.—*School Moderator.*

General Suggestions.—1. The teacher should always articulate clearly and pronounce correctly, when giving words for spelling.

2. Never overstrain the enunciation of a word in order to indicate its spelling.

3. Allow only one trial in spelling orally or in writing.

4. In spelling orally, the divisions into syllables should be marked by slight pauses, but in no other way.

5. Do not assign lessons too difficult for the pupils who have to prepare them. This compels the pupils to spell badly.

6. It is desirable that spelling should be taught to a considerable extent by means of composition, in order to give the pupils practice in spelling the words in their own vocabularies.

7. In some of the dictation lessons, time may be saved by having only words in italics spelled. The teacher should read the whole sentence, and emphasize the words to be spelled.—*Preface to Gage's Practical Speller.*

Notes and News.

ONTARIO.

Ingersoll Public School Trustees have increased the salaries of their teachers twenty per cent.

A kindergarten department is to be established in connection with the Toronto Normal School next session. During the remainder of the present session Miss Mareau, who has charge of the public kindergarten in the city, will deliver a course of lectures to teachers in training.

Mr. J. E. Wetherell, B.A., late head master of the Collegiate Institute of this town, is working up the Strathroy High School. There are now about 200 pupils in that institution, and steps are being taken to advance it to the status of an institute. We are pleased to hear of Mr. Wetherell's success. He is a very energetic and painstaking teacher, and deserves all the success which attends him.—*St. Mary's Argus.*

Alfred Baker, M.A., has just been appointed dean of residence. We learn also that William Dale, M.A., will receive the classical tutorship. It is rumored that on account of the scarcity of funds the new chair of Roman languages will be filled by a lecturer for the present. John Squair, B.A., the present acting lecturer, has received this appointment. D. R. Keys' duties are more definitely fixed by the new calendar. He is now designated as English lecturer. President Wilson confines himself for the future to history and ethnology.—*Toronto World.*

Pickering College occupies a peculiar place among the educational institutions of Ontario. It is under Quaker management, and though doing good work it never in any way forces itself into public notice. It has no parade exercises of any kind, neither opening nor closing formalities. No prizes are given, nor is there any marking system. Work is carried on in the belief that the students should work from love, and not from fear or feelings of rivalry. Co-education is adhered to, and the authorities claim to have the best literary society to be found in any institution in the Province outside of the University of Toronto.—*Globe.*

We understand that it is contemplated to organize a company of cadets among the pupils in the Collegiate Institute in this town. There is the material for a first-class company attending the Institute at present, and the drill would do them good. Three of the officers of the 28th Battalion in the town have agreed to spend an hour each week in drilling them. The Government will supply the rifles, and all the expense that the cadets would be at would be the clothing, which need not neccessarily be expensive. We hope to see the company organized.—*St. Mary's Argus.*

An interesting article in the July-August number of the CANADA SCHOOL JOURNAL on Penmanship was contributed by J. S. Carson, Esq., Inspector of Public Schools, Strathroy. He takes a broad, general view of the causes of poor writing in the common schools and therefore among the masses, and lays much of the blame at the door of teachers and school officers. Correct. We have no desire to complain unnecessarily for we are aware that people and officers generally get some blame, which they deserve, while teachers deserve some blame and they get it. We have been doing our very best to arouse some interest in penmanship among teachers, not ornamental, or professional, but plain business writing.—*From Woodstock Business College Mirror.*

Rev. Dr. Kemp, a graduate of Edinburgh University, who came to this country with the 26th Cameronians, and was afterwards pastor of St. Gabriel's church, Montreal, and joint editor of the Canadian Presbytery, died in Hamilton a few weeks ago. In 1874 Dr. Kemp accepted the principalship of the Brantford Young Ladies' College, which position he held until his acceptance of the principalship of the Ottawa Ladies' College in 1878. On retiring from this position in 1883, though broken in health and admonished to rest content with the life-long service he had been privileged to render, the veteran soldier preferred to die upon the field, and placing his services at the disposal of the church he filled pulpit appointments from week to week until completely prostrated by the progress of the disease that had for months been stealing away his strength. He passed peacefully away at the residence of his son-in-law, Mr. C. H. Sutherland of Hamilton. He leaves a widow, three daughters and one son.

"Bystander" in last issue of *Week* touches upon a subject which ought to be of interest to every man who has at heart the future welfare of his country, alike in Canada and the United States. He says:—"The writer of a letter to the *Globe* the other day sought an answer to the doubts created in his mind by the difficulties which arise about discipline in our public schools. Why are extreme measures necessary? Why are our young boys so disrespectful to their teachers in school, and sometimes afterwards? Why are many of them equally disrespectful to their parents, even in the presence of strangers? Why are they so insolent in the streets, using profane and foul language, puffing their cigar smoke in the faces of passengers, spitting on the dresses of ladies, and committing every sort of outrage? The facts, unhappily, cannot be disputed. Even Lord Dufferin, who poured his eulogies so copiously over everybody and everything, could not help declining to eulogize the manners of children. The blame, as the writer in the *Globe* is inclined to think, rests on the home. It cannot fairly be said to rest upon a school master, who is denied effective means of maintaining discipline among the pupils, and if he whips a young barbarian for the grossest outrage or the most contumacious disobedience, he is brought before a magistrate and fined for excessive punishment, his moral influence being at the same time totally ruined. The home, no doubt, is the chief seat of the evil. But the home itself only participates in the general decay of authority. Few of those who have studied social history without prejudice doubt that democracy, with all its drawbacks, is, on the whole and for the mass of the community, a vast improvement on any previous state of things. But democracy has its drawbacks, at least while it is crude, and before people have learned that without authority there can be no true liberty. The world has been too much occupied in deposing or constitutionalizing kings to think how order, which is indispensable to progress itself, was to be maintained when the kingly power was gone. Men are now afraid to rule their own households lest they should offend democratic sentiment. Indeed, the headship of the family is itself the object of special attack in which some, even of the churches, led by their anxiety to cultivate popularity are beginning to join. The home being the mould of character, domestic anarchy will breed insubordination in the commonwealth."—*Exchange.*

"The present Minister of Education and Dr. May as his subordinate have just hit on one of the most important reforms ever introduced into our school system. They have brought forward a practical measure, the effect of which will be an increase by at least one-third of the salaries of most public school and high school teachers. It is a truisim to say that the rate of pay for the skilled labor of a good teacher in one of our city schools has been far too low. But the pay in the city schools is better than in a country village school, and as a consequence a better class of teachers are secured for the city. Dr. May, at the instance of the Minister of Education, has issued a circular to all public and high school teach-

ers, informing them that at the end of the present term a series of gratuitous lessons would be given in the science of drawing and perspective, so as to prepare them for being able to pass an examination, the successful candidates at which will receive certificates of being competent to teach practical drawing. A school for art is to be established in connection with every mechanics' institute in the province, and teachers competent to instruct in drawing will receive an addition of at least $300 yearly to their salary.—*News*, Toronto, May 27.

Mr. J. S. Tilley, inspector of Public Schools for the county of Durham, has been appointed one of the model school inspectors of Ontario.

Trinity Medical School.—The special recognition this well known school has received within the past year, from the several Royal Colleges in Great Britain and Ireland, is a feature we are pleased to notice in connection with it.

Mrs. J. A. Moore, wife of J. A. Moore, B.A., of Goderich high school, died after a lingering illness, at the early age of 36 years. The disease, consumption, had been steadily undermining her system for three years, and for the past year but little hope was had of her recovery. Her illness was borne with Christian patience. The deceased lady was held in high esteem for her gentleness of manner and her piety.

Mr. W. Stahlschmidt, Principal of Preston Public School since 1869, handed in his resignation in order to devote his whole time and attention to the manufacturing of school, church, office, and lodge furniture. He has opened a factory for this work.

The Toronto Public School Principal's Association thinking that an attempt will be made to abolish the Superannuation Fund in the Province of Ontario, has submitted the following questions for consideration to the different Teachers' Conventions of the Province :—

1. Was not the Fund established (1) to encourage teachers to remain in the professien; (2) to compensate teachers in some measure for the inadequate salaries they received, by making some provision for them when they became incapacitated for duty?

2. What effect will the abolition of the pension grants have on the educational interests of the Province?

3. As it is admitted that the labors of teachers are indispensable to the public good, are their claims for aid, in their declining years, unusual or are the derogatory to their dignity or self-respect, in view of the fact that Ministers of State, Judges, and other public functionaries receive similar compensation for their services, and that churches regard it as a sacred obligation to superannuate their clergymen, to whose duties, in their moral aspect and influences, those of the school teacher bear so close an analogy.

4. Is it probable that the existence of the teachers' pension grant tends to prevent an increase of salaries, and that its abolition would induce the public to compensate them adequately for the loss thus sustained?

5. Would it not be more just to act on the merits of the case by a consideration of the services and claims of those teachers who spend their lives in the profession, rather than be guided by the decision of those who engage in school teaching only until they can enter upon more lucrative employment?

6. Are any teachers, whether they remain in the profession or not, justified in objecting to pay the small amount levied, in view of the advantages they receive, and of the claims of those who remain until incapacitated by age or infirmity?

At the last meeting of the Ottawa Teachers' Association the following resolutions were adopted:

Moved by Mr. R. J. Tanner, seconded by Mr. R. H. Cowley, that we, the members of the Ottawa Teachers' Association, avail ourselves of this our first opportunity as a body of expressing our sincere regret for the loss sustained by the Teaching profession in the early demise of our late esteemed member Mr. Samuel N. McCready, Assistant Master of the Provincial Model School, Ottawa, who as a teacher was pre-eminently successful, as a friend warm-hearted and generous, and as a citizens respected by all, and that we hereby tender to his widow and family our earnest sympathy in their sad bereavement, and that the Secretary be and is hereby requested to forward to the widow and the mother of the deceased gentleman and to each of the School Journals a copy of this resolution.

Moved by Mr. John Munro, seconded by Mr. John McMillan, that whereas this Association has learned with profound regret of the death of the late James McNevin, Esq., Mathematical Master of the Ottawa Collegiate Institute, who was in entire sympathy with this Association, and was ever ready to do his part in advancing the interests of Education, and who was a most successful and faithful teacher, an earnest worker, and a refined Christian gentleman.

Therefore be it resolved, that this Association extend its sympathy to Mr. McNevin and family and also to the parents of the deceased.

Be it further resolved that a copy of this resolution be forwarded to Mrs. McNevin, to Mr. McNevin (father of deceased) and also to each of the School Journals.

At the invitation of the Grimsby Park Association the National School of Elocution and Oratory will conduct their next summer term upon the grounds of Grimsby Park, commencing July 7th. We think the authorities of this important school have acted wisely and judiciously in their selection of a place to hold their third season in Canada for it is convenient to the boarders of the two countries and is delightfully situated as regard beauty of location and salubrity of climate. The aim and object of the school are now so well known that it is needless to mention the decided advantage that a course of study is calculated to produce in the case of those who have occasion to read or speak in public. That the school is appreciated is apparent from the fact of its re-appearance at this season for the third time in Canada.

NOVA SCOTIA.

The annual Convention of Dalhousie College, closing the session of 1883-4 was held in the House of Assembly Chamber, Province Building, on the 23rd of April. The venerable principal, Dr. Ross, presided and opened the exercises with prayer. The following degrees were confered :—*Bachelors of Arts.*—Henry Stanislaus Adams, Halifax; Edmund Munro Dill, Centre Rawdon, Hants Co.; Frank Jones, Digby; Donald McDonald, Cape North, Cape Breton; John Peter McLeod, Valleyfield, P.E.I.; Daniel Alexander Murray, Truro; William Bell Taylor, Halifax; Dawson Fyers Duckworth Turner, Liverpool, G. B. *Bachelor of Science.*—Henry McNeil Smith, Halifax.

The University prizes were announced and presented as follows : *Classics*—Fourth year, McLeod, J. P. Third year, Aiton, W. Second year, Robinson, A. First year, *Latin*, Shaw, Shaw, J. C. *Greek*, Fraser, D. *Mathematics*—First year, McNeill, Charlotte M. Second year, Stewart, D. *Astronomy*—Murray, D. A. *Physics*—Mackenzie, A. S. *Ethics*—McDonald, D. *Political Economy*—Turner, D. F. D. *Metaphysics*—Ritchie, Eliza. *Logic and Psychology*—Cahan, C. H. *English Language and Literature*—First year, McNeil, Charlotte M. *Chemistry—Inorganic*—Second year, Robinson, A. First year, Morrison, A. M. *Organic*—Smith, H. M. *History*—Fourth year, McLeod, J. P. Third year, Gammell, I. *French*—Second class, Turner, D. F. D. First class, McKenzie, A. S. *German*—Second class, Saunders, Maria F. First class, Aiton, W. Then came the following statement and presentation of special prizes :—*The St. Andrew's Church Prize*—Nicholson, A. Presented by St. Andrew's Pastor, Rev. L. H. Jordan, B. D. *North British Society Bursary.* ——— By the Principal. *The Waverley Prize*—Stewart, D. By the Principal. *The Avery Prize*—Turner, D. F. D. By Mr. Peter Jack. *The New Shakespeare Society's Prize*—MacKnight, Catharine K. By Prof. Schurman. *The Jack Herbarium Prize.*—Campbell, G. G. By Mr. Peter Jack.

An interesting feature of the Convocation was the presence of the recently organized Law Faculty and the announcement of passmen and prize-winners in that flourishing department of the University. The Law School prizes (as below) were distributed by Dean Meldon, Mr. Justice Thompson, and the other Professors :—*Hebrew*—Campbell, A. (New Glasgow.) Law School prize-winners were :—*Real Estate and Contracts*—W. W. Wells, Dorchester, N.B. *Torts and Crimes, and Contracts*—W. D. Carter, New Brunswick. *Construction of Statutes and Equity*—J. A. Sedgewick, Halifax. *Commercial Law*—P. C. C. Mooney, Halifax. *Constitutional Law, Evidence, &c*—C. Morse, Liverpool, N. S.

The valedictory oration was pronounced by Mr. D. A. Murray of the graduating class. Mr. Murray's paper was conceived in excellent taste, and rose quite above the level of ordinary valedictory addresses. The more formal exercises were followed by brief and appropriate speeches from His Honor, Lieutenant-Governor Richie, and Sir William Young. The Principal announced that the well-known benefactor of the University, George Munro, Esq., has placed at the disposal of the Governor funds for the endowment of a chair of English Literature, and had nominated as Professor, Dr. Alexander. The new Professor, having won the Gilchrist Scholarship for Canada, pursued a brilliant career at the University of London where he graduated B.A. He has since taken the degree

of P.H.D. at Johns Hopkins University, Baltimore, at which distinguished seat of learning, he won a conspicuous record in both classical and English literature. He is now pursuing a line of special study at the University of Leipsic.

Mr. E. H. Owen in consequence of ill health has been obliged to resign the Principalship of Lunenburg Academy, a position which he had filled for the long period of thirteen years. All who have knowledge of Mr. Owen's scholarship and educational zeal will earnestly hope for his early restoration to health. The post vacated by the retirement of Mr Owen has been filled by the appointment of Mr. M. R. Tuttle (B.A. Acadia.)

The fifth annual session of the Teachers' Association for Inspectoral District No. 4 (counties of Annapolis and Digby) was held at Bridgetown, on the 1st and 2nd of May. The meeting was called to order by L. S. Morse, Esq., A.M., Inspector of Schools, to whose tact and geniality as a Presiding Officer much of the success of the occasion was due. Nearly seventy teachers enrolled themselves as members. The following staff of officers was elected:—Vice-President, Mr. W. H. Magee; Sec.-Treasurer, Mr. L. Ruggles; Executive Committee, Messrs. A. D. Brown and J. A. Banks, Miss Jessie Prince and Miss A. M. Clarke. The following programme was submitted and most effectively carried out:—A Theory of (School) Government, Mr. J. A. Banks; Negative duties of the Teacher, Mr. M. H. Clarke; Object Lesson (subject, the oyster), Miss Augusta Palfrey; Language, Mr. W. H. Fairn; Progress—the watchword of the teacher, Mr. L. Ruggles; Time-tables, Mr. W. L. McGregor; Lesson in Elementary Physics, Miss Bonyman, (owing to Miss B.'s necessary absence through illness this lesson was given from her notes by Mr. A. D. Brown, in a highly interesting manner); Normal School Training, Mr. W. H. Magee. The papers, without exception, were well written and well read, and dealt with living questions in a practical and telling manner. The Association which is happy in the possession of many members who can "think and talk on their legs" gave every subject a thorough discussion. At intervals, many questions bearing on the School Law and its applications as well as on disputed points of grammar, &c., were propounded and interestingly discussed. Among other business transacted, a motion was passed to the effect, that, the President, Chairman of the Executive Committee, and Sec.-Treas., be a committee to forward a petition to the Legislature, praying for some tribunal other than a Magistrate's Court to try cases in which teachers are prosecuted for administering corporal punishment. The Association also adopted the following resolution, which was brought before it in connection with Mr. Magee's paper:—

"*Whereas* at present too much of the Normal School session is obliged to be given to non-professional work, to the neglect of the true end and intention of the Normal School as intended when it was first established,

And Whereas, no encouragement is now given to students to attend the Normal School, beyond the fact that they may do better work;

Therefore Resolved, that this Association petition the Council of Public Instruction both to raise the standard of entrance examination for B students equal to a license grade B.; for C students equal to a license grade C. and for D students equal to a license grade D.; less the professional papers in each grade; and to make the grants to trained teachers at least one fourth larger than the untrained and to give a larger proportion of the County grant to sections engaging for the term of one year trained teachers.

The regular exercises of the Association were interrupted on the evening of the first day by a public educational meeting, addressed by Dr. Allison, Superintendent of Education, and other gentlemen, to which the Bridgetown *Monitor* thus refers:—In the evening Dr. Allison, Superintendent of Education, addressed a large and appreciative audience in the Baptist Church on some of the leading educational questions of the day. The Dr. objected to the theory that education is the universal antidote for all the ills of social or national life. He, however, considered education a prime necessity; not intended to take the place of religion and morality, but a necessary accompaniment. He cited the growth of the local press as an indication of progress, our school system has been instrumental in producing a reading public. The moral duties of the teacher were clearly set forth. Every teacher has the opportunity of placing before his pupils a high example of all that is noble, pure, true and good; of teaching the broad principles of morality. The claims of the industrial interests were clearly, logically and forcibly defined. The necessity for a closer connection between our common schools and colleges was noted, and improvements suggested. The lecturer closed his remarks with a few words of cheer and earnest appeal to teachers and patrons. At the close of the Doctor's remarks short but appropriate addresses were given by Revds. Mr. Wilkins and Warren, J. G. H. Parker, Esq., and Dr. J. B. Hall. This public meeting was one of the most successful ever held under the auspices of the Association. On motion a vote of thanks was tendered Dr. Allison which received a suitable response.

Mr. Angus McLeod (grade A) has been elected to the principalship of the County Academy, Kentville. For several years past, Mr. McLeod has been principal of the public schools, New Glasgow. In the latter position he has been succeeded by George Patterson, B.A., late principal of the County Academy, Baddeck, C. B.

During the past few months under the sagacious guidance of supervisor McKay much prudent progress has characterized the course of educational events in the city of Halifax. Probably Halifax never had a Board of Commissioners more competent to deal with the important interests of public education.

The annual session of the Provincial Educational Association is announced for the 16th and 17th of July at Truro. The programme of exercises is looked for with much interest.

ENGLAND.

When we find a lady heading the subscription list with £10,000 towards the building fund of the New College for Women at Hampstead, and other ladies coming forward to found scholarships in the same institution, we must admit that it will not be for lack of enthusiasm on the part of members of the fair sex themselves if an epicene ideal as regards education is never realized. The possibility of its realization, however, is becoming daily more apparent. Whatever may be the result of the meeting of Convocation at Oxford, which is being held while we go to press, on the question of admitting women to certain of the ordinary examinations of that University, nobody can doubt that the decision in their favor already arrived at in Congregation will sooner or later be endorsed.

Referring to this subject, "An Old Don" protests, in the columns of the *Pall Mall Gazette*, that it is a great mistake to imagine that "the craze" for admitting women is entirely due to a disinterested enthusiasm on the part of the teaching profession at Oxford for the education of women. Matrimonial considerations he declares to be at the bottom of the whole agitation:—

"The secret spring of this movement and its sustaining force is to be found in the permission given a few years ago to the Fellows of Colleges to marry. As a natural result, as time rolls on and their families begin to multiply, they find themselves unable to make both ends meet, and like others in the same predicament, they have to cast about to find means of supplying the necessary funds to provide their children with 'bread and butter.' They had about reached the end of their tether so far as one half of creation was concerned. By hook or by crook, it was impossible to extract another fee from the masculine section of the human race. But, having exhausted the resources of the males, they discovered in womankind a vast and undeveloped field from which the astute teacher might reap a golden harvest."

The "Old Don" adds:—

"Why, of all places in the world, young ladies who are so anxious to perfect their studies in classics and in physiology should persist upon being admitted to a small town where two thousand young men of the marriageable age are assembled together, is a thing which I cannot understand, excepting on the supposition that it is not culture so much as a husband of which they are in search. But I cannot consent to quit the field without at least a protest on behalf of those old-fashioned notions of modesty which used to be regarded as the shield and crown of womanhood. The remarks that are made upon the young women who are prosecuting their studies in the University towns by the young men are, as I think, regrettable, nor would I for the world subject any of my female relatives to such an ordeal."

To this "An Oxford Lady" replies:—

"If there are people who believe this kind of thing, there is no help for it! One can but shake 'the head of sorrow on the shoulders of amusement!' But when one thinks of the unfortunate Professor of Latin—one of the most distinguished of European scholars—devoting the leisure hours of the three afternoons a week

during term to dragging a small number of imperfectly trained girls through their Cicero or their Horace, for a sum considerably less than he could earn by a single article in a magazine; or when one remembers the many hardworked and kindly college tutors who, sooner than let those who want to learn go without teaching, have devoted the walking and recreation time they could ill spare to the poorly paid labors of the Women's Association, one puts the facts as they are side by side with your correspondent's remarks, and one realises once more what kind of evidence it is with which prejudice will content itself."

Mrs. Kitchener, of Newcastle, who for eight years has kept a calendar of teachers holding University Certificates, thus records experience :—

"For teachers in high schools a University Certificate is absolutely necessary, and each class has its regular separate value, *i.e.*, a woman with a Third Class may succeed better in the long run than her sister with a First Class, but she must be content to start behind her in the race. With regard to private governesses, parents are thoroughly alive to the advantages of having a governess whose knowledge has been tested. It is true that they not unfrequently write that 'refinement and high moral tone were more valuable to them than a First-Class Certificate,' but they almost invariably added that, *if they got the former without the latter, they would expect to give a lower salary.*"—*Educational Times.*

GENERAL.

The National Educational Exposition to be held in Madison, Wis., July 15-18 of this year, promises to be highly successful. It will certainly be one among the most notable exhibitions of the kind that have ever taken place. The exhibits will be organized in twelve departments, those, viz., of the Main Exhibition, which will include work of the higher schools, both public and private: industrial education; art; kindergarten; selections from the National Educational Museum; pedagogic literature; Ward's Museum of Mineralogy, Geology, and Zoology; school architecture, including ventilating and heating apparatus; school journals and other current educational publications; apparatus and supplies; school books and school furniture. The exhibits in the main department will be grouped in three classes. Class I. embracing examination manuscripts, specimens of penmanship, graphic work, etc., prepared by students according to prescribed rules. Class II.—Special work, prepared by students, for which no rules are prescibed except such as may be made by the teachers or by local school authorities. Class III.—Materials arranged by students, teachers, or school authorities, and presented to illustrate systems, processes, and results of instruction.

A writer in the Boston *Advertiser* complains that teachers in Masschusetts are frequently removing without just cause, and he calls for the abrogation of the custom of electing teachers for a single year. He takes the sensible ground that teachers ought to be chosen to serve during efficiency and good conduct. The practice now in vogue he characterizes as "worse than Greek ostracism."

A student of Harvard medical school wrote an excellent set of papers for examination lately, and two others copied them word for word. The examiner ranked the papers at 98 per cent., and for a moment the trio were happy. Then he remarked to them as the three papers were identical, they were entitled to an average of about 33 per cent. each, and as 50 per cent is required for a diploma, all three were plucked. The youth who wrote the papers is still wondering at this display of even-handed justice.

A contest in pronunciation gave great amusement at a church social meeting in Chicago lately. Each candidate was called in separately, and required to read the following sentences :—

The root of the difficulty was a pile of soot allowed to accumulate on the roof.

The rise of the waters has injured the rice crop, and it may be expected that the price will rise.

He had moved his goods to the depot, but his friends bade him not to be discouraged, as he would soon become acclimated if he would only stay.

He is an aspirant for Asiatic honors.

The disputants seemed to be conversant with the question, and if not good financiers, they are at least familiar with the problems of finance.

The irrefragable evidence that he was the sole cause of the altercation indisputably fastened on him the responsibility for the irreparable damage.

His conduct was indicatory of the blatant blackguard, but his complaisant coadjutor, with his incomparable complacency, was even more dangerous.

The physician, after a careful diagnosis, pronounces the patient to be suffering from bronchitis, gastritis, periostitis, and meningitis, caused by the prevalence of mephitis, and has prescribed morphine.

S. D. Risley, M. D., who has devoted much time to the study of ophthalmology among the pupils of the public schools, in an illustrated lecture at the Spring Garden Institute of Philadelphia upon the subject, "Our School Children's Eyes," showed that one of the most important considerations and one which is most frequently overlooked in the building of our schools is their architectural adaption to the laws of optics. The position of a window or a black-board may become the source of serious widespread optical weakness among the pupils. He deprecated the practice of giving young students lessons to prepare at home after school hours, and recommended greater attention to the character of the type used in the text books. He held that children are sent to school too young, and thought that better results would be attained if pupils were not eligible to the public schools until eight or ten years old.

French Schools.—A prominent feature of republican France is the attention which is paid to education. Between 1870 and 1881, 16,678 schools have been erected, at an average cost of $2,600. In a recent statement M. Jules Ferry said, in vindication of the money spent on education by the government, that there was not a village church but cost $8,000, and that the school was at least of equal value. Twenty years ago the ambition was to erect churches. Now it is to erect schools. In the course of ten years it is expected that 400,000 schools will be erected throughout the country, at a cost of $60,000,000 to localities and $140,000,000 to the State. In the event of any parish proving contumacious the prefects are invested with compulsory authority. The school buildings are to be modelled after the best patterns of those of England, Belgium, Saxony and Wurtemburg, and the value of the playground is much insisted upon. There can be no two opinions as to the value of education to the republic, but it will be a misfortune if education is divorced from religion.—*New York Herald.*

The experiment of dispensing with recesses is being tried with success in some of the schools of New York. In the Yorkers schools it has been found to work well for the study, health and morals of the children. Physical exersises are introduced twice during the morning and once during the afternoon session. At a signal the doors and the windows of all the class rooms are simultaneously opened, so that the buildings are filled with fresh air, and three to five minutes are devoted to vigorous calisthenics. Good results are said to have followed.—*Detroit Evening Journal.*

At last women are to be admitted to the Oxford University examinations. They have gained a great victory over the more illiberal portion of the Uuiversity, and, although not yet placed on a footing of full equality with their sisters at Cambridge, they are now certainly in a position to fight their battle for "complete academical equality" with their undergraduate brethren at Oxford, as the Warden of Merton puts it, in practically assured hopes of success. On Tuesday last (February 26th), the battle to which we have been referring was fought and won in Congregation at Oxford. The proposal was to the effect that women should be admitted to certain of the University examinations, those in Mathematics, Natural Sciences, and History, *pari passu* with men. In these schools both the sexes are for the future to be examined by the same examiners, and the class-lists issued after each examination are to be similar in the two cases. This is all that was secured by the form of statute proposed on Tuesday, but it is highly satisfactory to note that the proposal was carried by the large majority of 54,—100 voting in favor, and 46 against the statute.—*School Guardian.*

Strange to say, Texas limits by statute the salaries of her teachers. We never yet saw town or city so generous to this class of servants that it became necessary for the State to interfere to prevent extravagance. But it would seem that the love of education is so strong in the breasts of the Texans, that they have felt obliged to place themselves under guardianship through fear of impoverishment. It is evident, however, from the *Texas School Journal*, that the law has not worked well, for it has proved impossible under the law to obtain a sufficiency of first-class teachers. It is suggested by the same paper that the engine be reversed and *minimum* salaries be provided by law.

Readings and Recitations

A STORY OF FOUR BOYS.

The Atlanta *Constitution* says : This paper has printed many a story of denial, energy, and heroism, but none more deserving than that of the Green boys.

These four boys started a few years ago selling newspapers. They made ten cents apiece the first morning they went to work, and for two winters thereafter they went barefooted, through the snow and sleet in the freezing dawn, on their morning rounds. From the very first they wisely saved a certain percentage of their earnings, which they wisely invested in Atlanta real estate. The oldest one of them is now eighteen years of age, and the youngest twelve. They have supported an invalid father and their mother all the time, and now have property worth considerably over $5,000, houses from which the rent is twenty dollars a month, and $200 stock in a building and loan association. They have educated themselves the meanwhile, remaining from school this year in order that they might work the harder and build a home for their parents, that is to have a front parlor and a bay window in it. These little boys have been carriers, newsboys, errand boys, about the *Constitution* office, and one of them is now assistant mailing clerk. Their net savings from their sales and salaries, exclusive of their rents, have been twenty dollars per week for the year. Next year they can do better, and by the time the oldest of the brothers is of age they ought to have a comfortable little fortune.

What these boys have done other boys can do. The whole secret is steadiness, sobriety, industry, and economy. There are few lessons for boys more important than that the smallest amount—no matter how little it may be—will make a man independent if he will only live inside of it and compound his surplus. It must have been discouraging to these youngsters when it took them a month to lay up a dollar, and it was heroic in them when they laid this dollar up and went barefooted over frozen ground rather than use it to buy shoes. It is easy now when they are comfortably clad and housed, and everybody about them is comfortable, and their savings amount to twenty times a week more than they were formerly able to save in a month. They have conquered life almost before they have entered it, and if they will only keep cleanly hearts and genial souls, and broad, hearty impulses, they will not only be rich but useful men.

HAND IN HAND WITH ANGELS.

BY LUCY LARCOM.

Hand in hand with angels,
Through the world we go ;
Brighter eyes are on us
Than we blind ones know ;
Tenderer voices cheer us
Than we deaf will own ;
Never, walking heavenward,
Can we walk alone.

Hand in hand with angels
In the busy street,
By the winter hearth-fires—
Everywhere—we meet,
Though unfledged and songless,
Birds of Paradise :
Heaven looks at us daily
Out of human eyes.

Hand in hand with angels,
Oft in menial guise ;
By the same straight pathway
Prince and beggar rise,
If we drop our fingers,
Toil-embrowned and worn,
Then one link with heaven
From our life is torn.

Hand in hand with angels ;
Some are fallen—alas !
Soiled wings trail pollution
Over all they pass.
Lift them into sunshine !
Bid them seek the sky !
Weaker is your soaring
When they cease to fly.

Hand in hand with angels ;
Some are out of sight,
Leading us unknowing
Into paths of light.
Some dear friends are loosened
From our earthly clasp,
Soul in soul to hold us
With a firmer grasp.

Hand in hand with angels,—
'Tis a twisted chain,
Winding heavenward, earthward,
Linking joy and pain.
There's a mournful jarring
There's a clank of doubt,
If a heart grows heavy,
Or a hand's left out.

Hand in hand with angels,
Walking every day :—
How the chain may lengthen,
None of us can say.
But we know it reaches
From earth's loveliest one,
To the shining seraph,
Throned beyond the sun.

Hand in hand with angels !
Blessed so to be !
Helped are all the helpers ;
Giving light, they see.
He who aids another
Strengthens more than one ;
Sinking earth he grapples
To the Great White Throne.

THE LITTLE PHILOSOPHER.

The days are short and the nights are long,
And the wind is nipping cold ;
The tasks are hard, and the sums are wrong,
And the teachers often scold.
But Johnny McCree,
Oh ! what cares he,
As he whistles along the way ?
"It will all come right
By to-morrow night,"
Says Johnny McCree to-day.

The plums are few, and the cake is plain,
The shoes are out at the toe ;
For money you look in the purse in vain
It was all spent long ago.
But Johnny McCree,
Oh ! what cares he

As he whistles along the street?
Would you have the blues
For a pair of shoes,
While you have a pair of feet?

The snow is deep, there are paths to break,
But the little arm is strong,
And work is play, if you'll only take
Your work with a bit of song.
And Johnny McCree
Oh! what cares he,
As he whistles along the road?
He will do his best
And leave the rest
To the care of his Father,—God.

The mother's face is often sad—
She scarce knows what to do;
But at Johnny's kiss she is bright and glad,
She loves him, and would not you?
For Johnny McCree,
Oh, what cares he,
As he whistles along the way?
The trouble will go,
And "I told you so,"
Our brave little John will say.

—*Harpers' Young People.*

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

South Grey.—The semi-annual meeting of the teachers of South Grey was held in Flesherton, April 29th and 30th. The programme was a good one, the discussion lively and instructive. A pleasant entertainment was provided for the evening.

Perth—The teachers of the county of Perth held their semi-annual convention in Stratford, Wednesday and Thursday, 14th and 15th May. The meeting which was exceedingly interesting was characterized by the usual discussions on the various subjects taught in our public schools, and the reading of essays. A novel and pleasing feature of the meeting was the rendition of a number of kindergarten songs by D. G. McNeil, of Downie, with his class of thirty scholars. Mr. J. E. Hodgson, M.A., H.S.S., gave an address on the "Study of Words" which was full of interest and practical utility to teachers. At the evening meeting addresses were delivered by Rev. Mr. Wright and D. D. Hay, Esq., M.P.I. Excellent readings were given by Mr. Ludwig, and Miss Macdonald, and music by Misses Katie Johnston and Walker.

Waterloo.—The teaching profession are, we believe, unanimous in the opinion that the late convention held here was the most successful, viewed from whatever standpoint, which ever took place in the county. The presence of the Minister of Education, and his practical remarks, added much to the interest of the proceedings and Mr. Ross won golden opinions during his visit. The honorable gentleman displayed an intimate and thorough acquaintance with all matters pertaining to education and evinced a laudable desire to ascertain the views of the profession and others interested in the proposed changes. Mr. Ross is the right man in the right place, and is adopting the proper course to become acquainted with the requirements of the people, and many needed reforms may with confidence be looked forward to in the Education Department within the next year. The Hon. Minister has both the courage and the ability to carry out his convictions.

West Huron.—The semi-annual meeting of the West Huron Teachers' Association was held at Exeter on Thursday and Friday, May 8th and 9th. After routine business a communication from the Women's Christian Temperance Union with reference to the introduction of scientific temperance education into the public schools, was read and referred to the resolution committee. In the afternoon Mr. T. F. Young read an able and instructive essay on "Teachers and Teaching." After some remarks by Messrs. Henderson, Brown, Gregory, Holmes and Huston, a vote of thanks was tendered to the gentleman for his able paper. Miss Dickson then illustrated her method of teaching an "Object Lesson" with class-subject "wheat," which was well received, and elicited a hearty vote of thanks. Miss Henderson then took up "Primary Drawing," with illustrations, which caused an animated discussion. The lady was tendered a hearty vote of thanks for her effort. In the evening a large and attentive audience met in Mr. Drew's hall to listen to the excellent rendering of various selections by Professor Chapman, of Hamilton, and to the very fine music furnished by the local talent. At the close a well merited vote of thanks was given to Professor Chapman and the musicians. On Friday Mr. G. Holmes read a spicy paper on "Whither are we drifting," coupled with "What can be done to give greater permanency and stability to the teacher's position," which evoked a very lively discussion and the usual vote of thanks. Miss Oliver next read a carefully prepared essay on "Temperance," which was well received. The singing of Miss Helyar's class received much applause. The following resolutions were passed: 1st. That we, as an association, are strongly of the opinion that a diffusion of scientific knowledge of the effects of strong drink is greatly in the interest of morality. That it can be well taught in a public school, and, therefore, we memoralize the Minister of Education to incorporate lessons on the subject in the series of readers. 2nd. That increased Legislative aid should be granted to public schools and distributed on the basis of the amount paid to the teacher. The appointment of Messrs. J. R. Miller, S. P. Halls and Huston, to meet with a committee of the East Huron Teachers' Association, anent the union meeting; and the appointment of G. Baird, sr., as delegate to the Provincial Association, brought this pleasant and profitable meeting to a close.

North Huron.—The regular annual meeting of this Association was held in the Central School, Seaforth. The first paper discussed was one on "False English," by Mr. Crighton of Seaforth High School. He illustrated his meaning by references to periodicals, newspapers, and selections from many authors, showing the ambiguity frequently met with. A hearty vote of thanks was tendered Mr. Crighton for his subject. Mr. W. G. Duff, of Roxboro, next presented his paper on "Discipline." Mr. Duff showed first that discipline was essential and elevating, he then proceeded to show how to obtain it. Mr. Duff received a well deserved vote of thanks upon the conclusion of his paper. Miss Graham, of Brampton, introduced the subject of "Difficulties in Reading," suggesting remedies for common errors and difficulties encountered in the average school. Upon motion of the Secretary, seconded by Mr. McFaul, a vote of thanks was tendered Miss Graham. Mr. Groves next read the delegates' report, which on motion was adopted. On the evening of Thursday the Association assembled in Cardno's Hall to hear Miss Graham's evening of reading. The readings were interspersed by musical selections, Miss Ewing, of Seaforth, playing three instrumentals, and Miss Callendar, of Clinton, a solo. Upon resuming work on Friday morning Mr. H. S. McLean, of Clinton High School, pointed out frequent "Errors in Pronunciation," illustrated by a long list of words frequently if not usually mispronounced. Mr. Shaw moved, seconded by Mr. McGill, Tuckersmith, that a vote of thanks be tendered Mr. McLean for the manner in which he had treated the subject. A discussion then followed as to the advisability of holding a union meeting of the West Riding Association with the North Huron Association, when it was finally decided that we deem it advisable to hold such union meeting, and that Messrs. Malloch and Turnbull, of Clinton, and Mr. Ferguson, Wingham, be a committee with full power to act. The President appointed Messrs. Shaw, Henderson, Duff, McFaul, Lough and Stewart a committee on nominations. Mr. W. H. Stewart, of Lakelet, next presented his method of Teaching "Multiplication Tables and Division," showing how readily a child might understandingly learn the latter from the former. On motion of Messrs. Henderson and Harstone a vote of thanks was tendered Mr. Stewart for the pains he had been at to prepare his subject. A vote of thanks was also tendered Misses Ewing and Callendar for their kind assistance the evening before at the entertainment. In the afternoon Mr. Turnbull sketched a brief outline of "Herbert Spencer's Education," and pointed out that though philosophic in all its arrangements, it was not practical, from the fact that Spencer himself was not a practical but a theoretical educationist. Mr. Turnbull on motion of Messrs. Harstone and Malloch received a hearty vote of thanks. The committee to draft a resolution of condolence with the family of our late Inspector, Mr. Dewar, reported as follows: We, the members of the North Huron Teachers' Association, regret that since our last meeting one who always took a prominent part in our proceedings has passed away from amongst us. The late Inspector, Mr. Dewar, will be long remembered by the teachers of the Institute, and also by the numerous friends whom he made in the various parts of East Huron during the past twelve years. His genial disposition, his kindness of manner, his invariable urbanity with the teachers under his care, and his fairness of dealing in the school room have rendered his memory particularly dear to them. We desire to give expression to our sympathy with Mrs. Dewar and the other members of the family in the severe loss that they have, in the providence of God, been called upon to sustain, and trust that they may be enabled to draw comfort and support in their affliction from a higher than human source. Signed, D. M. Malloch, L. L. McFaul, J. Turnbull and J. Shaw. Moved by Mr. Duff, seconded by Mr. Lough, that the report be received and adopted, and that the Secretary send a copy of

the resolution to Mrs. Dewar.—Unanimously carried. The nomination committee presented their report as follows: President, Mr. W. G. Duff, Roxboro; Vice-President, Mr. W. R. Lough, Clinton; Secretary-Treasurer, Mr. W. E. Groves, Wingham; Provincial Delegate, Mr. J. Ferguson, Wingham; Executive Committee, Messrs. J. Ferguson, L. L. McFaul, D. C. Dorrance, A. A. McKay and J. King. The nominations were one by one adopted. J. A. Morton, Esq., and Dr. McDonald, Wingham, were re-appointed Auditors. A vote of thanks was tendered the retiring officers and the Association adjourned.

CHATHAM DISTRICT.—The semi-annual convention of the Chatham District Teachers' Association was held at the Central School, Chatham, on Thursday and Friday, May 22nd and 23rd, 1884. After the opening exercises Miss Metcalfe read an essay on Culture; after which a chorus was rendered by some of the teachers. New business, including the appointment of Mr. Shaw as delegate to the Ontario Teachers' Association and the reading and adoption of the Treasurer's report was then disposed of. After a few questions for the question drawer were collected the following new officers for the incoming year were appointed, viz.: President, Mr. J. Birch; 1st Vice-President, Mr. J. Brachen; 2nd Vice-President, Miss M. E. Orr; Secretary, Miss Mary O'Neil; Treasurer, Mr. W. M. Nichols, P. S. I. In the afternoon the Hon. G. W. Ross, Minister of Education, addressed the Association on various topics, such as superannuation of teachers; the renewal of third class certificates, and granting of permits, (these permits the gentleman considered a great evil, inasmuch as every teacher applying to the Inspector for a permit loses his independence, and often places the Inspector as well as himself in a false position;) the intended changes in text books; the propriety of requiring county councils to aid in supporting High Schools in towns separated from the county, especially as many of the county teachers are educated in the said High Schools, &c. The superannuation question was discussed pretty warmly and such words as "stepping stone teachers" and "unfair competition" were pretty freely bandied. Even the fact that there were many ladies in the profession was by some considered a great grievance and it was openly stated that their competition kept down the salaries of the men; and stalwart men in receipt of high salaries noted that contribution to the superannuation fund should be compulsory for the lady teachers, though these same men openly opposed that the contributions required should be a percentage on the salary received. They also passed a resolution that no monies paid into the fund should be refunded except in case of the death of the teacher while employed in teaching. As the results of these discussions the following resolutions were passed:—1st. That the superannuation fund be continued. 2nd. That a service of 25 years should be considered sufficient to entitle a teacher to the superannuation fund. 3rd. That no refund be made to any teacher, of the amount contributed to the fund except in case of death while employed in teaching. In the evening a public meeting was held at which Rev. Dr. Laing, of Dundas, delivered a very able address on "The End of Education, and the proper means of obtaining that End," and the Hon. G. W. Ross delivered a lecture on educational matters in general. A chorus of children rendered songs. On Friday morning the subject of "School Periodicals" was brought forward by Mr. Nichols, P.S.I., West Kent. The subject of Phonography was then introduced by Mr. Smith, after which Rev. Dr. Laing, of Dundas, addressed the Association in a very able manner on the subject of "Examination" the relative value of which the Dr. thinks is far too highly estimated inasmuch as many of the qualifications necessary to a successful man in any capacity can never appear on examination papers. At the commencement of the afternoon session Dr. Laing again addressed the meeting on "The Bible in the School," noting the fact, that, education is not so much the mere storing the mind with certain abstract facts, as it is the development of mind and moral nature in such a manner as to make the pupil a useful member of society, and as an immortal soul, to fit him for eternity. Therefore is it consistent that while five days in the week are given to the mere temporal matters of education about twenty or thirty minutes on a Sabbath are given to the study of the Bible? At the end of Dr. Laing's address a vote of thanks was given him and he was made an honorary member of the Association. Dr. Cameron then delivered an address on "Physical Culture," at the close of which he was given a vote of thanks and made an honorary member of the Association. A paper on "Frequent changes of Teachers" was read by Mr. Rothwell; an illused member of society, to judge from the tenor of his paper which was full of the wrongs which fall to the lot of some teachers. The frequency of change and the unfair competition of "stepping stone teachers," and last, but obviously not least, female teachers. What a crying evil lady teachers seem to be to some of these gentlemen! In our country though a man has every profession open to him, and he has all trades to choose from, while ladies have in reality but one profession—that of teacher—open to them; and though from time immemorial woman has been the teacher of the young, still it seems that our competition in our own particular profession is an irredeemable wrong to some men who through force of circumstances (for they acknowledged that to be the fact) were compelled to remain teachers. Probably Mr. Rothwell would like the Chinese system to be adopted and all superfluous females to be put to death during infancy. The next subject "How to Think and Write on Simple Subjects" was introduced by Mr. J. G. Rose, and after a few questions from the question drawer were answered, the meeting adjourned. ELIZABETH S. E. DAWSON, Secretary.

DURHAM.—The next meeting of Durham Teachers' Association will be held in the High School Buildings, Port Hope, on Friday and Saturday, June 13th and 14th, at 2 p. m. On June 13th Hon. G. W. Ross, Minister of Education, will be present, and he desires to meet Teachers, Trustees, Municipal Officers, and all interested in education. J. Gilfillan, President; A. Barber, Secretary.

REVIEWS.

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THE AMERICAN UNIVERSITY: WHEN SHALL IT BE? WHERE SHALL IT BE? WHAT SHALL IT BE? pp. 22, paper. JOHN W. BURGESS, PH. D. OF COLUMBIA COLL. *Ginn, Heath & Co., Boston, 1884.*

In this timely *brochure, American* means United States. Every one interested in the University question should read it. It is immensely suggestive, exceedingly lucid, and has the rare merit of saying the actual truth about the American higher and secondary education.

NOTES ON SHAKESPEARE'S VERSIFICATION. With two appendixes.—pp. 34, paper. By Geo. H. Browne, A.M. *Ginn, Heath & Co., Boston, 1884.*

A very useful book for class purposes, crammed with information. Readers will here find the spelling reform put into practice—"giv, hav, publisht, forct," etc. There is "a short descriptiv bibliografy" at the end. The book is interleaved for notes.

ENGLISH OF THE XIVTH CENTURY, illustrated by notes grammatical and philological on CHAUCER'S PROLOGUE AND KNIGHT'S TALE By Steven H. Carpenter, A.M., Univ. of Wis., cloth 313 pp. *Ginn, Heath & Co., Boston, 1884.*

Morris's text, full notes, and glossary with short grammatical outline. The notes are in large type; copious, and judicious. Those who value their eyes will prefer it to the Clarendon Press series. The book forms the best introduction to the study of early English.

AN INTRODUCTION TO THE STUDY OF THE ANGLO-SAXON, with selections for reading, explanatory notes and a vocabulary. Cloth 213 pp. Same Author and Publishers, 1884.

The grammar covers forty pages, giving just sufficient to enable the student to begin reading. The extracts are easy and the notes supplement the grammar. The time is near at hand when those who have made a specialty of such studies as these will find a ready market for the skill they have acquired in our early literature. This book is the best we have seen with which to make a good beginning.

LIBRARY OF ANGLO-SAXON POETRY. VOL. I. BEOWULF—Harrison & Sharp. Cloth, 319 pp. VOL. II. EXODUS AND DANIEL—Hunt. Cloth, 120 pp. Same Publishers, 1884.

The texts are accurately and beautifully printed. Vol. I. follows Heyne's fourth edition; Vol. II. follows Grein's text. The glossaries are very full, and we heartily recommend these cheap, handy volumes to all students who have any taste for our earliest literature. To those who have not had the advantage of early training in Latin and Greek, an effectual door is opened to our own early classics. The mine is worth working.

MAGAZINES.

St. Nicholas for May is exceedingly good. Its illustrations are life-like and its stories excellent, especially "Historic Boys." Young Olaf, the boy viking afterwards king of Norway, is the hero of the story for this month and is a good story character. Boys and girls who study history as well as those who do not would find "Historic Boys" very useful and interesting. In the April number a good part of Henry of Monmouth's youth is described. This great and historic boy was afterwards Henry V. of England. The "Scarlet Tanager" is another good story and is one which all the 7,000 teachers of Ontario should read with care. It shows forceably how a wayward boy was reclaimed not however by his master's stick but by the interest and kindness shown on the part of the teacher towards the boy.

CIRCULAR TO PUBLIC SCHOOL TRUSTEES.

GENTLEMEN,—

I understand that many unauthorized books are being used in our Public Schools. The Education Department is unfairly censured for the frequent changes made in the use of Text Books, and, as I am convinced that much of the censure arises from the use of unauthorized books permitted by the Teacher, without the knowledge of the Trustees, or of the Department, I would call your attention to the provisions of the Law, and request you to make special enquiry at your school, and report to me every Teacher, with his P.O. Address, that permits the use of any unauthorized Text Book. You are also desired to report the names of the books so used and what action you have taken, as a School Board, in the matter. Unless a vigorous effort is made by the school authorities to prevent this infraction of the Law, it will be necessary for the Department to put in motion the powers which the statute confers upon it. The following are the provisions of the Law:—

(*a*) Duties of Public School Inspectors. Chap. 204, sec. 194, R.S.O.

To prevent the use of unauthorized, and to recommend the use of authorized, books in each school.

Not to give a cheque for any portion of the school funds to any school section which has not been conducted according to the law and regulations provided under its authority.

(*b*) Duties of Teachers. 44 Vic., Chap. 30, sec. 12.

No teacher shall substitute for any authorized book in actual use in his school, any other Text Book on the same subject, unless and until he shall have obtained the written approval of the Public School Board of Trustees, and the Public School Inspector, to such change; but every such approval must be sanctioned by the Minister of Education, and no such change shall take place until the first day of January which shall occur after the first day of July previous to which such approval and sanction have been obtained; and in case any teacher or other person shall negligently or improperly substitute any Text Book in place of any authorized Text Book in actual use upon the same subject in his school, he shall for each such offence, on conviction thereof before a police magistrate or justice of the peace, as the case may be, be liable to a penalty not exceeding ten dollars, payable to the municipality for Public School purposes, together with costs, as the police magistrate or justice may think fit.

(*c*) Duties of Trustees. Chap. 204, sec. 102, sub-sec. 23, R.S.O.

To see that no unauthorized books are used in the school, and to see that all the pupils in the schools are duly supplied with a uniform series of authorized Text Books.

Section 12. No portion of the Legislative School Grant shall be applied in aid of any school in which any book is used that has been disapproved of the Education Department, and public notice given of such disapproval.

Section 228. Trustees shall be personally responsible for the amount of any school moneys forfeited by, or lost to, the school section in consequence of the neglect of duty of the Trustees during their continuance in office.

As School Trustees you are responsible for seeing that the regulations regarding Text Books are faithfully carried out. It is exceedingly desirable that the utmost vigilance should bo exercised in the matter above referred to.

GEO. W. ROSS,
Minister of Education.

Toronto, March, 1884.

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Table of Contents.

	PAGE.
EDITORIAL :—	
The Holidays	145
The Drawing Master, the Trustee, and the Drawing Book	146
Current Literature a necessity	146
University Federation	146
Women at the Universities	147
The place of the University in the Educational system	147
Agricultural Education	148
Reports of Cases	148
MATHEMATICAL DEPARTMENT	149
CORRESPONDENCE	149
SPECIAL ARTICLES :—	
Agricultural Education	151
State Aid for Higher Education	152
Krao—The Missing Link	152
MISCELLANY :—	
Marty's Various Mercies	153
Uncommon Proceeding	155
Anderson the Wizard Sold by a Yankee	156
How He Came to "Swear Off"	156
PRACTICAL DEPARTMENT :—	
The Glory of Teaching A-B-C	157
The Teaching of History	157
Practical Cross-Questioning	158
Discipline	158
Lessons in Language	158
Letter from Colonel Parker	159
Government Schools in France	159
Things for Teachers to Remember	160
Good Language	160
NOTES AND NEWS :—	
Ontario	161
Nova Scotia	161
Prince Edward Island	163
New Brunswick	163
General	164
PUBLISHERS' DEPARTMENT	164
READINGS AND RECITATIONS	164
TEACHERS' ASSOCIATIONS	165
REVIEWS	167

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The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

THE HOLIDAYS.

School is over, school is over !
Down the hazel brake we go,
Where the nuts in leafy cover,
And the ripe blackberries grow.

Head the ship for England !
Shake out every sail,
Blithely leap the billows,
Merrily sings the gale.
Captain, work the reckoning ;
How many knots a day ?
Round the world and home again
That's the sailor's way.

Prospera lux oritur : linguisque animisque favete,
Nunc dicenda bona sunt bona verba die.
Lite vacent aures, insanaque protinus absint
Jurgia : differ opus, livida lingua, tuum.
Salve, laeta dies, meliorque revertere semper,
A populo rerum digna potente coli.

Enough for one year of schools, school-houses, teachers, trustees, parents, pupils, programmes, plans, methods, conventions, laws, regulations, and examinations. Now in well earned holidays let us put on a holiday spirit, and cast dull care and drudgery behind us. This is the time for healthful relaxation, for toning up the overwrought nervous system, for storing up vital energy, developing muscle, expanding the lung space and throwing off the effect of confinement in a vitiated atmosphere. Sunshine and pure air, healthful exercise on the saddle, at the oar, with the hay fork, the bat, the bycicle, the geological hammer, the botanical portfolio, the agent's satchel, the fishing rod and the berry-basket—these are natural remedies after six months' severe toil in the school-room amid chalk-dust and carbonic acid. Change of scene, cheerful companions, cheerful books, merry pic-nics, amusing expeditions to forest, lake and mountain sunshine and laughter, plenty of wholesome food and balmy sleep, these will soon bring the flush of bounding health and animal spirits back to the wearied teacher and cast the shadows of the past behind him. Brethren and sisters, the holiday number of the CANADA SCHOOL JOURNAL comes to preach to you the gospel of joyous holiday and relaxation.

"We educate our minds and neglect our bodies," says Paxton Hood. "It is now clearly seen that one powerful means for procuring a healthy mental state, is to procure a healthy bodily state, not merely the absence of disease but that state in which all the faculties are fulfilling, with ease and delight, their various degrees of strength and growth. Do not run into debt with Nature," he continues, "let every day pay its own way. Wines and rich meats, and injudicious sleep, and injudicious exercise, drain the health from the blood and by and by will present a terrible balance-sheet for instant settlement.

EDUCATE YOUR SKIN.—The state of the skin exercises no inconsiderable influence over the whole state of the body. Many persons impair their nervous state by never thoroughly cleansing their body, for the sensibility of the skin gives a tone to the temperament. In its healthy state it is capable of exquisite enjoyments, which many never experienced. The wind and the fanning breath of the air, the cold but bracing atmosphere—these are an inspiration and an enjoyment to those whose frames have been rendered sufficiently healthy and hardy to enjoy them.

EDUCATE YOUR MUSCLES.—Thank God, if you are compelled to walk. Cafriage exercise is a mere joke and does the horses far more good than the riders. It is one of the penalties entailed upon our present state of civilization, that we have but little exercise; our mechanics, artisans, manufacturers (and teachers) scarcely ever exercise their limbs. A good smart walk of ten, twenty, or thirty miles, this is a blessing : the writer knows it, for there are few counties in England or Wales, where he has not measured some hundreds of miles on foot. The muscles unexercised, acquire lassitude, weariness, and soon give up all exertion. Instead of exulting in a walk of thirty miles, they tremble at the bare idea of walking one. But walking, walking, what pleasure there is in the mere act of walking upon some long pleasant level ! if relieved by alternating hill and dale, so much the better. My poor lackadaisical brethren, I must e'en pity them, and perhaps laugh at them ; and have I not earned the right to do so ? for as a pedestrian, some of the fairest

scenes in all the broad borders of England have unveiled themselves to me. Walk, leap, run, exert arm, leg, body; but, in some way or other exercise!

EDUCATE YOUR SLEEP.—Many persons have habituated themselves to a very sparing allowance of four or five hours on the average. But there are few for whom it is sufficient; from seven to eight hours should be the average of your sleep. Yes! if you would create and make time *educate your sleep.*

Thus far the Rev. Paxton Hood. And now the editor throws away his quill and runs to catch the steamer for Niagara with a feeling closely akin to that of a certain New York pastor who threw his satchel on the table of a summer boarding house down in New Jersey with the remark, "There, thank goodness, I shall not have to preach or *pray* for the next six weeks."

THE DRAWING MASTER, THE TRUSTEE, AND THE DRAWING-BOOK.

In our last issue we referred to the combination of a Toronto trustee with a Toronto drawing master to manipulate for their personal gain the text-books of the schools with which they are officially connected. We observed that a good text-book for elementary classes must of necessity be the work of a practical teacher well acquainted with the details of the subject possessed of the power to present the matter in an attractive form and with due regard to the requirements of educational method. It fell to our lot to point out that although Mr. O'Brien may be a good artist with the brush, he shows a lamentable lack of power when he stands with the crayon to teach elementary drawing to a class in the public schools. It is manifestly quite possible to paint pretty good landscapes and at the same time to know very little of elementary drawing. We believe Mr. O'Brien has confessed as much in his letter to the secretary of the Art School declining to undertake the duty of examiner and acknowledging that he was not familiar with the principles of scientific drawing. The letters also in the daily press which have recently appeared describing his want of method and consequently of success with junior classes abundantly prove his inability to claim the rank of a practical teacher of drawing.

The questions naturally arise: Is such a gentleman competent to produce a text-book on the subject? Is it conceivable that any advantage will result from his efforts except the benefit to himself and his trustee-publisher? What could induce any man to undertake work which he does not pretend to understand? Is it allowable for a trustee and a teacher thus to arrange for a total change of books and system in their schools for their own private advantage? The public will simply get no system in the place of a well-tried system, and an inferior text-book by an amateur will displace the finely graded course. The crude performance of an inexperienced teacher published by an interested trustee will hardly satisfy the people of Toronto. The taint of personal aggrandizement will cling to the whole transaction, for it may be briefly summed up as useless expense to parents, confusion in the schools, and some little pecuniary profit to two gentlemen who use their public position for their own private advantage.

While he adheres to his proper sphere Mr. O'Brien commands our respect, but when he enters into a doubtful combination with a trustee to foist upon the public schools an inferior text-book on a subject of which he knows nothing practically, we feel obliged to enter our emphatic protest and bring the whole matter thus prominently into public notice.

The increased volume of correspondence to this JOURNAL is one of the hopeful signs of the times. It is to be hoped that experienced men and women all along the lines will take the pains to write short accounts of their experiments and results for the benefit of the younger members of the profession.

If the financial and social standing of teachers is to be elevated, *the teachers must do it themselves*, they must not leave it to others. When the true professional spirit, the real *esprit de corps*, animates the whole army of teachers, they will move in solid column and their combined influence will be a power that will brush aside all opposition and procure for them their just position and reward.

CURRENT LITERATURE A NECESSITY.

It becomes more and more evident to those who come in contact with our young teachers that the daily paper and the magazine are almost as essential to a teacher's daily life as desks and books. There are daily papers published at even three dollars a year and teachers in rural schools would do well to consider whether they can afford to cut themselves off in isolation from the great stream of the world's thought and work for a whole week at once. Any teacher of enterprise could soon organize an exchange club among his neighbors in adjoining sections. If a teacher never reads a first-class review, never sees a daily paper, reads no professional journal he will soon find himself as completely out of date as some moss-covered fossil in the middle of a hemlock swamp. There is no money better invested. The CANADA SCHOOL JOURNAL would not be true to its mission did it not urge on teachers the apparent prodigality of spending their last dollar rather than become isolated from the great currents of modern civilization. Such prodigality is the truest economy.

UNIVERSITY FEDERATION.

The *Christian Guardian*, the chief organ of the Methodist church in this province, has at length taken a firm stand for a new departure in higher education. The *Guardian* remarks that the Union has made changes inevitable in their college work and that the present is a good time to consider any scheme that would allow Methodists to share in the advantages of the state provision for university education. The religious oversight of the students, and security as to the character of professors being guaranteed, the *Guardian* declares that it would be neither wise nor patriotic for the denomination to

stand aloof and hand over the endowments of the university to other churches which have no better claim to them than the Methodists. It observes that there is good ground to believe that the Ontario government is disposed to go as far in formulating a plan that would be acceptable to the Church Colleges as the public sentiment of the country will warrant. It asks, "Are our people generally willing to hand over our State University to Presbyterians, Baptists and others, as if they had rights to its advantages that Methodists have not? Can there be any reasonable doubt that by bringing Victoria College into closer relations to our Provincial University we would widen the sphere of our Church influence, and increase the spirit of inter-denominational unity, which now happily prevails?"

Every friend of higher education must sympathise strongly with this common sense view of the situation. The plan is perfectly feasible, and deserves the most careful and friendly consideration on all hands. University College, whatever may be its shortcomings or whatever its achievements, is not the University of Toronto. The University is wide enough to include a cluster of colleges, each having its own internal government and working on its own special lines, just as the Dominion can embrace a score of provinces. A loving and catholic spirit is all that is necessary to ensure the successful arrangement of mere matters of detail. If Victoria College is removed to Toronto and placed in close connection with Toronto University it will immediately assume a leading place and wield a power before unknown. It will be able to maintain the finest theological department in the province, and will receive endowments and equipment which will astonish its warmest friends. We speak guardedly in saying that the Methodist Church has not yet put forth half its real energy in this matter, surprising as its efforts have already proved to outsiders. On the other hand, the University gains in geometric proportion with every additional college added to the circle. Let no one mar this wooing by bigotry and prejudice. It is in accordance with reason that the wedding should take place.

WOMEN AT THE UNIVERSITIES.

We regard it as a most hopeful sign of the times that young women in annually increasing numbers are availing themselves of the facilities afforded in this province for obtaining a University training. The Commencement of the University of Toronto was marked this year by the extraordinary occurrence of a young girl, Miss Eliza Balmer, of Toronto, taking a double scholarship in the second year of the curriculum, and by the appearance of the names of several others high in the honor roll of the third year. Most prominent amongst these now fourth year undergraduates are the two Misses Brown, daughters of the late Hon. George Brown, and Miss Bald, of Welland, all of whom will probably take this year, along with several others, the degree of B.A. The Senate of the University has for several years past done itself honor by admitting women to its examinations and class lists, but unfortunately women have not as yet been allowed to attend lectures in University College, and whatever distinction they have been able to gain has been won in spite of this unfair disadvantage. Last session the Provincial Legislature which has the most complete control over the institution, passed a resolution asking the College Council to admit women to lectures. It is hardly conceivable that the latter body, the members of which are simply public servants, will venture to ignore the request, but if they do so much the worse for themselves and the College. The female undergraduates must be allowed to attend lectures provided for them at the public expense, and there is no reason why they should be called upon to suffer injustice for even another session.

THE PLACE OF THE UNIVERSITY IN THE EDUCATIONAL SYSTEM.

With the elecion of Principal Miller, the High Schools will *begin* to be represented on the senate of the provincipal university. Hitherto they have been represented in name but not in reality, for their nominal representative has done absolutely nothing towards getting the university placed in thorough harmony with the secondary schools of the country. We are not aware of a single measure proposed or advocated by Mr. MacMurchy. We have never been able to learn that he has done more than attend the meetings very regularly and very regularly vote with the ultra do-nothing party. The medieval policy of Mr. MacMurchy towards the girls of his own school, which the government Report points out, renders it wholly improbable that such a representative could identify himself with liberal and progressive measures, and the high school influence has simply been lost.

The advent of Mr. Miller, a man of a different type, will, we hope, do much towards bringing the university into accord with the high schools and making the relation between her and them as close and as complete as that now existing between them and the primary schools. Until this is done the university will not wield the power in our system which is hers by right.

There were this year over 200 candidates for junior matriculation, and it is not rash to predict that the number will be trebled before 1890 if the senate is only true to the real interests of education. The high school masters must elect four representatives instead of two, and the high school inspectors must be placed on the senate. For surely, if Upper Canada College with 225 students, many of whom could not pass the entrance examination, is entitled to one representative, then the 104 high schools with about 13,000 students might be allowed six. The government also might as well appoint a few members not a generation behind the times on educational affairs. Liberal measures will soon follow, and we shall see secondary and higher education thoroughly welded together in one harmonious system.

In our opinion the solution of the problem is to be found just now in the local examination system of the Provincial University, and if the Senate of that institution is only alive to its true interests, it will promptly extend the system. We need not enter into any details of such a scheme, for every High School master understands what is meant, and every member of the Senate should be able to do so. At present the University of Toronto sends out to any locality desiring them, the regular papers of the junior matriculation, and of the first and the second year examination. The subjects are arranged in groups any one or more of which the candidate may take. These local examinations were instituted for women only. What is wanted now is (1) to throw them open to both sexes, and (2) to accept as fully matriculated all candidates who pass in all the subjects of any examination at one time. As the expense of these local examinations is borne by the locality asking for it the Senate can go on with the work of expanding the system without fear of financial burdens.

The Chancellor on commencement day congratulated Toronto University on the large increase in the number of its matriculants during the past few years. Perhaps he was not aware of the true cause of this increase—namely the assimilation of the junior matriculation to the High School intermediate work. This assimilation was chiefly due to the presence at that time in the Senate of Dr. McLellan, who as High School Inspector and member of the central committee was in a position to see the need of a *modus vivendi* between the University and the Education Department and of suggesting the true remedy for the defect then existing in the system. We have no hesitation in predicting, if the local examination system is expanded as indicated above, a much more rapid increase in the number of matriculants. If no greater percentage of them pass than have been in the habit of passing the intermediate the halls of the University will be crowded to repletion. The Senate should not be backward in trying an experiment which will cost so little and has in it such great possibilities.

AGRICULTURAL EDUCATION.

We have received a copy of an admirable lecture by the Hon. Donald Ferguson, Provincial Secretary of P.E.I. It is marked by strong common sense and does not assume the extravagant positions taken by many writers and speakers who discourse on agricultural education. It is admitted that agriculture cannot supersede reading, writing and arithmetic, and that the elements of agriculture could only be imparted to the pupils in the advanced grades. "The object of education," says the lecturer, "is two-fold—the training of intel lect and the giving of facilities—and the best system of education is that which turns out in the fields of the world the most skilful workmen, supplied with the best tools..... While it may be admitted that the curriculum of our schools is well adapted for the training of mind, it may well be asked if the education imparted in our higher schools should not partake of a more practical character." The improvements suggested may be gleaned from the following:

"We can give more time and more prominence to the sciences relating to agriculture in the Prince of Wales College, so that all our teachers may in future be qualified to pass an examination in the elements of agriculture before obtaining a license. We can offer an inducement to teachers already licensed, so that they can come in for examination in this branch of education. We can, by rigid inspection, provide that the text-book on agriculture already prescribed by the Board of Education is thoroughly taught to the pupils in the advanced grades of our schools. When we have done this it will be found in agriculture, as in general education, that a good elementary instruction for the masses is, after all, far more important than higher attainment placed only within the reach of a few. To make great progress in this direction teachers must *all* be qualified to handle an elementary text book, and the use of it in our public schools must be made compulsory.

I regard all higher education in our Province as virtually technical. We have no class in the Dominion of Canada which it is desirable to train for a life of literary leisure. At the plough, on the deck, in the workshop, in the learned professions, in the halls of legislation, Canada presents a life of earnest, self-denying work, as the noblest career for every one of her sons. The practical idea should, therefore, permeate every lesson of the school, until master and pupil catch the inspiration.

One of the most hopeful signs of the times in which we live is to be found in the very general movement now going on in different countries to place farming on a scientific basis by instructing the farming population in the principles of their profession."

This lecture will be found a valuable contribution to the question of practical education.

REPORTS OF CASES.

E. Test, M.D. of Richmond Normal School says: I have a case or two in illustration,—

In my earliest days of district-school teaching, I had in my school at the same time two of the dullest boys at their books that one locality is likely to produce. They could read blunderingly in the Third Reader, but would not progress in the general work of the school. But I soon found that one of them was quite skilful in making pictures on his slate. I at once utilized his talent for drawing. I set him to drawing geometrical figures and taught him how to find their surfaces and volumes, and soon had him interested in numbers. I had him copy maps, and then draw the same from memory till he became one of the best geographers in school. By copying the likenesses of the famous persons named in his United States history, he became interested in their lives and learned many important facts of history. In short, in two winters he passed from a very dull boy to a fair average in all his studies, and to special excellence in some.

The other boy referred to, proved to have a special capacity for numbers—was, in fact, a sort of "mathematical fool." Everything which could be connected by figures he was able to learn and remember, and thus soon lost his reputation as a dunce.

My experience with these two boys has been very valuable to me, though I have not always been able to achieve equally marked success in the same length of time.

Mathematical Department.

FALLACIES.

1. Let $a=1$ and $x=1$ $\therefore$ $a=x$. Multiply these equals by a and $a^2=ax$. Subtract x^2 from each side and $a^2-x^2=ax-x^2$. Factor both sides $(a+x)(a-x)=x(a-x)$. Divide both sides by $a-x$ and $a+x=x$. Substitute a for x since they are eqaul, and $2a=a$. Divide both sides by a and $2=1$.

2. Let $a=x$ $\therefore$ $a-x=0$. Multiply both sides by 2 $\therefore$ $2(a-x)=0$. Hence we have $a-x=0=2(a-x)$. Divide this by $a-x$ and $1=2$, thus confirming the conclusions of (1.)

3. The minute hand of a clock goes twelve times as fast as the hour hand goes. Suppose the clock shows the time to be XII o'clock precisely. The minute hand at the next beat of the pendulum begins to gain on the hour hand and must go round 60 minute divisions before it can get back to XII. Meantime the hour hand will have gone $\frac{1}{12}$ of 60 or 5 minute divisions and will be at I, so that the minute hand is 5 spaces behind the hour hand. Now while the minute hand is going over these 5 spaces, the hour hand will go over $\frac{1}{12}$ of 5 spaces or $\frac{5}{12}$ of a space, and the minute hand will be $\frac{5}{12}$ of a space behind. Then while the minute hand goes over this $\frac{5}{12}$ of a space the hour hand will go over $\frac{1}{12}$ of $\frac{5}{12}$ of a space or $\frac{5}{144}$ of a space, so that the minute hand will still be $\frac{5}{144}$ of a minute space behind the hour hand. Similarly while the minute hand goes over this $\frac{5}{144}$ space the hour hand will move ahead $\frac{5}{1728}$ of a minute space, and so on, $\frac{5}{20736}$, etc. On the whole it is clear that there must always be $\frac{1}{12}$ of a definite fraction of a minute space between the hands, consequently the minute hand can never exactly overtake the hour hand, and therefore, *a fortiori*, the minute hand of a clock can never pass the hour hand.

4. Take straight line A————B. Describe on it the square $ABCD$, making D opposite A and C opposite B, the square being above AB. Bisect AB in E. Join DE. Produce DE to meet CB produced downwards in F. Then in the triangles ADE and EBF the side AE=the side EB by construction ; the angles DAE and EBF are equal, each being a right angle ; the angles DEA and BEF are also equal, being vertically opposite. The triangle ADE is therefore=triangle EBF by I. 26.

Again from B draw BG perp. to EF. Then in the triangles DAE and EBG the angles at E are equal as before, and the angle at A is a right angle=angle BGE, and the side AE=side EB. Hence triangle DAE=triangle EGB by I. 26.

But by the former proof triangle DAE=triangle EBF. Hence triangle DAE and triangle EBG are each=triangle DAE and must themselves be equal, that is the whole triangle is=to the part of it. Hence the axiom ought to read "the whole is sometimes =to the part.

5. $\sqrt{-1}=(-1)^{\frac{1}{2}}$, by the theory of indices. But $(-1)^{\frac{1}{2}}=(-1)^{\frac{2}{4}}$ and this is=the fourth root of the second power of (-1), since the numerator always indicates a power and the denominator a root when we have a fractional exponent ; *i.e.*, $(-1)^{\frac{2}{4}}=\{(-1)^2\}^{\frac{1}{4}}$. But $(-1)^2=+1$ $\therefore$ $\{(-1)^2\}^{\frac{1}{4}}=(+1)^{\frac{1}{4}}$. Now the fourth root of $+1$ is $+1$, for $(+1)(+1)(+1)(+1)=+1$. Hence on the whole $\sqrt{-1}=+1$, and therefore the square root of -1 is not impossible. Also $\sqrt{+1}=+1$, $\therefore$ $\sqrt{-1}=\sqrt{+1}$ and $\therefore$ $-1=+1$.

6. "The study of mathematics educates to no sagacity in detecting and avoiding the fallacies which originate in the thought itself of the reasoner." "Mathematical reasoning allows no room for any sophistry of thought." "A mathematician is not compelled to be on his guard against the fallacies which beset the route of the ordinary reasoner." "A man is made to reason justly in mathematics in the same manner in which a man is made to walk straight in a ditch." "It requires a most ingenious stupidity to go wrong" in "a science in which there is no reasoning wrong." —Sir Wm. Hamilton, *in various works.*

If Sir Wm. Hamilton is correct—*which we do not assert*—we hope the readers of this Department will not allow themselves to lie under the charge of "a most ingenious stupidity." He says, "Mathematics are the easiest of all sciences ; their perspicuity is excessive. A mathematical reasoning may certainly transgress in form, and a railway locomotive may go off the rails. To minds of any talent mathematics are only difficult because they are too easy." Therefore we invite our readers who have "minds of any talent" to point out in the above, especially in No. 3 and No. 4, just where the locomotive of thought was derailed. The conclusions are certainly false, at what point does the reasoning "transgress in form"? In case the perspicuity does not prove very excessive, it may be well to apply to Sir Wm. himself for light—say to his *Logic*. *Locke* and *Reid* give no countenance to his assertions, but we have no more space for quotations.

7. The following false solution appeared a year or two ago in the *British Mechanic:*

Given $397\frac{1}{2}x^{260}=400x^{259}-2\cdot75$ to find x.

Solution. $1589x^{260}=1600x^{259}-11$,

$\therefore$ $1600x^{259}(x-1)=11(x-1)$. $\therefore$ $x=1$, one root.

$$1600x^{259}=11, \text{ and } x=\left(\frac{11}{1600}\right)^{\frac{1}{259}}.$$

Note.—Perhaps it is only fair to add some further examples of fallacies at our own expense. We give our readers our hearty consent to detect and correct those rather prodigious ones on pages 103 and 104 of the May No. We feel sure all our friends would enjoy the holidays better if they could see the avalanche of correspondence that has come down upon the unprotected editor *in re* aforesaid fallacies. If it were a question of politics or theology, we might escape but in the imperial domain of mathematics sophistry will not pass muster. We have, however, appreciated the kindness and courtesy of the numerous friends who took the trouble to point out the mistakes and we return them cordial thanks. The following are some of the slips which occurred :

No. 1, part 2. The second 7 should be $\frac{7}{4}$ and the result $3\frac{247}{256}$.

No. 2. The correct result is $43\frac{1}{3}$ seconds, *i.e.*, L.C.M. of $\frac{13}{12}$ and $\frac{10}{9}$ seconds.

No. 4. "C in $\frac{160}{7}$ hrs." should read C in $\frac{56}{5}$ with corresponding corrections throughout.

No. 4. 59 days is correct, since the *true* discount is required. But $\frac{59}{365}$ of 8 should evidently read $\frac{59}{365}$ of $\frac{3}{100}=\frac{472}{36500}$ instead of $\frac{472}{365}$, and the discount is $\frac{472}{36072}$ or $\frac{118}{9243}$ of the face, $\therefore$ P.W. $=\$493.616$.

No. 5. 75 lbs should read 70 lbs, and advance=40 % not 50 %.

No. 8. The solution is correct, but the problem is misprinted. It should have read, "the cost per mile is equal to as many pence as there are miles."

We wish all our readers a joyous holiday free from all fallacious hopes, and we trust that these amusing mistakes may help to cure them of dyspepsia in case they raise π^t too frequently.

Correspondence.

To the Editor of the Canada School Journal.

Will you please answer the following questions in your next issue.

1. Does the History for the next Intermediate Examination include English, Canadian & Roman History?

2. What are the subjects for the non-professional examination for First Class C in 1885?

3. Is General History required?

4. Can a teacher who has taught for several years on a 2nd class certificate, if successful in passing the non-professional examination for 1st C present herself for examination at the professional examination without previously attending a session at the Normal School?

Yours Truly,

Minnie Smith.

Flesherton May 26th 1884.

Reply—1. Yes. 2. See Canada School Journal page 75, April No. The other subjects are fixed, apply to the Department for course of study. 4. Ask the Deparment ; we believe the answer is, Yes, but you had better get an offical reply.

To the Editor of the Canada School Journal.

Dear Sir.—It is with pleasure that I have read your articles on "Canadian History" and "The Eleventh Plague" in the May number of the Journal." Please permit a word or two, I believe that the custom officials of Windsor have confiscated several of the foul publications you mention, as being obscene literature. May not the allegations that you have made be equally applicable to many of the serials of our weekly and daily newspapers. Take M. E.

Braddon and a certain class of writers that contribute to bazzar pattern, "Fireside" "Hearth" and "Home" Journals. What do they deal with but divorce, poisoning, murders, treachery, "The pardonable indiscretion" (See Toronto *Globe* on "Juvenile Crime") and a host of other evils that our youth know too much of already. In other countries many historical events are taken as bases for children's stories and also for healthy literature for older ones the best example of which is the collection of Sir W. Scott. I believe that the Rev. Dr. Withrow of Toronto is about the same work but on a smaller scale, taking events in Canadian History as groundwork. In the fight against the "Eleventh Plague" you say "The Canada School Journal will assist you." Could not the Journal sow broadcast the idea that we have in Canadian History a number of events that could be put into form of healthy literature, that a short spicy and palatable story could be got up in cheap form. that inducements could be held out to form cheap Public School Libraries where none at present exist, and additions to those that are in existance with these books, that one or so could pe printed in the "Journal" as a serial and that the Government offer a series of prizes to writers in Canada on Canadian subjects, the Government to state the subject. The prizes need not be large; just enough to pay for the trouble, and I think many would try. Temperance societies have offered such prizes, Agricultural Societies, Missionary Societies &c., &c., have offered them. Why could not a little be done to purify the public taste in literature? Surely many of our papers, which you say deprecate the evil, would forward the work by publishing some of the better class of the productions. These are but ideas thrown out. Please overlook the crudity of style in presenting them. Should other correspondents to your estimable "Journal" notice them, different means of carrying on the work will multiply, and doubtless ere long the Dime and Nickel foes will be met by foemen who will eventually crush them.

Trusting that this will meet with a favorable consideration,

I remain, yours very truly,

Kingsville Ont. May 20th, 1884. FRANK LEIGH.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR.—Please answer in CANADA SCHOOL JOURNAL the following questions:

1. A teacher is engaged with trustees at $440 per annum and commenced duties in the beginning of the year, but has resigned, and agreement terminates on Aug. 17; what will be the amount of salary claimed by teacher?

2. If Boards of Trustees modify the Public School Programme, must it be for the whole school or for individual pupils? Or does the regulation deal with schools or with individual pupils in a school?

Yours &c.,

SUBSCRIBER.

REPLY—1. We do not know that this question has ever been settled by the Department. Apply for an official answer, or have it settled in Court and let us hear the result. Our opinion is that the teacher is a salaried officer paid by the year, holidays included. He is not employed merely by the day to teach so many days, therefore in the present case the teacher should claim 229 three hundred and sixty fifths of $440, since he has been teacher 229 out of the 365 days of the year. In all cases the teacher can claim pay for the holidays immediately following.

2. The Board cannot interfere with the internal management of the school. It has no direct authority over pupils. It can make regulations and direct the teachers to carry them out. For example the Board cannot expel a pupil, but may direct the teacher to do so. We are strongly of opinion that any regulations of the Board which do not apply generally are *ipso facto* void and could not be enforced. You had better state the facts particularly and ask for an official decision from the department.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR.—Please oblige by answering the following questions:—Can a teacher be brought before a magistrate and fined for slapping a pupil on the jaw with the open hand; In punishing an outrageous pupil I unintentionally caused his nose to bleed. The boy's father brought me before a magistrate who gave me the alternative of a fine or signing an agreement binding myself under penalty of fifty dollars, to refrain from slapping pupils on the face in future. I accepted the latter. Had the magistrate power to act in the matter?

Yours truly,

R. M.

REPLY—1. Yes, undoubtedly. 2. The magistrate certainly had the power to impose a fine on the ground of assault; but the agreement under penalty is open to serious doubt. In any case the teacher could appeal against the magistrate's decision.

REMARKS—Any teacher who strikes a pupil on the head either with the hand or with any instument is wholly at the mercy of the magistrate. There is no excuse possible for such a form of punishment. It is exceedingly dangerous to the pupil and has frequently produced life-long injury. It is not only very undignified on the part of the teacher but is entirely wrong and unnecessary. The law provides the teacher with ample power to deal with unruly pupils without resorting to barbarous methods. In the present case the injury was only slight but it is easy to imagine how it might have been very serious, such in fact as would have tortured the teacher with remorse for the rest of his life. The only corporal punishment to be permitted in a civilized society consists of blows on the open palm with a broad soft strap. Any teacher who resorts to indiscriminate beating not only outlaws himself but inflicts disgrace and injury upon the whole profession, just as a physician guilty of mal-practice damages all his professional brethern.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR.—On behalf of myself and several fellow students I write to thank you for your timely editorial on "Our Normal Schools." I passed through the Toronto school myself and have good reason to appreciate your remarks. To our class the "unmitigated sham" was a useless bore and complete humbug, the outside appearance of a teacher with nothing inside. My classmates used often to ask with indignation how such a fraud on the students could be continued from year to year. I hope you will not let the subject drop until a real teacher is put in the place of the helpless scold who used to fool away our time on "as" and "but" and everlasting derivations instead of giving us any help with the subjects we had to prepare for our final examination. You have only hinted at the evils we had to endure. I could easily fill pages with examples of the way that our time was wasted in listening to tirades of scolding which sometimes consumed nearly the whole hour set down for a lecture. The so-called lectures in education consisted of a queer collection of musty old notes which were dictated to us to be copied down. We received no benifit from them whatever as they did not help us at all on the final examination and were of no use in the practical teaching. We had a play of Shakespere to prepare, and we did not get the least assistance from the so-called lectures in literature. I have often gone into the lecture-room and spent a whole hour on two lines, even on one line, and I remember once we did not quite finish the etymological bosh on the first two words before the time was up! We heard nothing about literature or Shakspere, it was all derivation, derivation, analysis and parsing, about which the examiners asked us nothing. By the end of the session the class had not finished one act even in this fashion, and we should have been better off if we had had the time to ourselves to read the text-book. It was the same thing with "Bain's Education," there was no teaching, no drill, and the class had to scramble through at the final without any assistance. I cannot begin to describe the mixture dubbed education, and I very soon ceased to take

it down from dictation. I could not make head or tail of it, and I fancy if it were printed it would read very much like Ayer's Almanac. Then to enliven the proceedings we had no end of bad temper and scolding. I remember a young lady gave a correct answer but added something at the end that rather spoiled it. "There you go," cried the reverend gentleman, "like a cow that gives a pail of milk and then kicks it over?" To a student who sat near me one day, he remarked, "Don't open your mouth so wide, Mr. D———, or we shall see what you had for breakfast."

Mr Editor, I am not ungrateful to the teachers I have had who treated me like a human being, and did ever so little to encourage me and help me along. But it is very hard now to smother resentment against the sham that wasted a lot of my time for nothing and worried me for half a year with snubbing and scolding, instead of teaching the subjects he was paid to teach. Surely Mr. Ross and Dr. McLellan must have some idea of this miserable failure. If not it is time the students let them know a few of the particulars. I hope the JOURNAL will agitate the question till a better state of things comes about. I hope I have not made this letter too long and that you will give it a place in your next issue.

Yours truly, AN EX-NORMALITE.

Special Articles.

AGRICULTURAL EDUCATION.*

BY HON. DONALD FERGUSON.

As in nearly all other reforms, the advocate of agricultural education must centre his hopes on the rising generation, and we have not begun a day too soon to teach the children in our schools the elements of agriculture. When the day has arrived when all our teachers are qualified to give instruction in the elements of agriculture, and when the boys and girls who graduate from our common schools are taught the first principles of the profession which most of them are destined to follow for a living, a bound will be made in the way of progress of which we can now form but little conception, and the public school teacher will rise to the full dignity of his calling. And the work of education commenced in the school will go forward on the farm. The boy who has mastered the first principles of agricultural chemistry at school will be able to understand and appreciate more advanced works with his advancing years. His studies will go on, hand in hand with his work, and as he finds himself able to master difficulties, he will acquire a confidence in himself and a pride in his profession. What is the reason that so large a proportion of the sons and daughters of farmers manifest so strong a distaste for their fathers' calling? It is, I believe, because, with most of them, they are only brought in contact with the most uninteresting and repulsive work of the farm. They see in farm employment nothing but a life of drudgery before them. Teach them that a pure bred Durham, or Jersey, or Ayrshire, well cared for, can be sold as readily for hundreds, or even thousands of dollars, as a scrub can for twenty or thirty; teach them that butter can be made which will sell for fifty cents, or perhaps a dollar a pound, as easily as the common article will bring twenty cents, and with no increase of labor. Teach them that success in farming does not *all* depend on hard work; but that skill will as surely earn its reward in agriculture as in other callings, When our boys are *thus* taught, they will gladly remain at home, not as mere "cucumbers of the ground," but as skilful producers, and then we may hope to see Prince Edward Island take the front rank as an agricultural country, which nature designed that it should occupy.

The object of education is two-fold—the training of intellect and the giving of facilities—and the best system of education is that which turns out in the fields of the world the most skilful workmen, supplied with the best tools. How far does the Public School System of Prince Edward Island accord with this ideal is a subject well worth considering. While it may be admitted that the curriculum of our schools is well adapted for the training of mind, it may well be asked if the education imparted in our higher schools should not partake of a more practical character.

It may be replied that this instruction is eminently practical, inasmuch as it forms part of the educational training of commercial and professional men. Such reply fully admits the force of the objection, and as agriculturists greatly outnumber all other professions put together, in like proportion should the educational training of farmers preponderate in the curricula of our higher schools. A tree is known by its fruits, and systems of education must be judged by their results. And here I must express my conviction that a false idea of life is too often formed in our higher schools, and their tendency is to wean young men away from the farm. The ambition of nineteen-twentieths of the teachers, and the atmosphere of the school, lead in other directions. The result is that a medley of youths, whose natural place is at the plough, or in the workshop, are pitchforked into professions already full to overflowing, there to engage in a struggle, in which, by the process of "unnatural selection," there is not even the satisfaction arising from being assured of the "survival of the fittest.'

But our schools are not wholly responsible for the false idea of life which is presented to the mind of the young. A native of the Island scarcely ever obtains a situation in the United States of greater importance than a school trusteeship with us; but our newspapers proclaim, with many flourishes, the success of another "Islander abroad." If a student from the Island wins a prize in a Dominion or American College, no matter how slight the competition or how impractical the study, the never-failing paragrapher heralds the achievement as a marvellous success.

Even a man at home who, with, it may be, little education and less capital, but a superabundance of cheek, determines to make a living by reckless speculation, is complimented and flattered; while the unassuming producer, who, by his intelligence and industry, adds to the public wealth, is comparatively unnoticed. With such false ideas held out before them, is it any wonder that farmers' sons resolve to leave the Island, and go into more attractive employments? They see nothing before them on the farm but hard, monotonous and unappreciated work, and they want to be doctors, or lawyers, or merchants, or anything that will keep their hands soft and white, and secure for them a respectable position in society.

And those who do remain at home cannot wholly repress the unbidden sigh, as they see their schoolmates and brothers enjoying present riches, and living lives of apparent ease. Time will surely bring its revenges and dispel the glamor through which such distorted views of life are now obtained. The farmer may live to see the merchant bankrupt, the doctor without patients, and the lawyer pushed aside in his profession by younger and more aspiring rivals. Take my word for it, in the end it will be found that the farmer, who skilfully practises his calling, "has chosen the better part," and that he can most favorably compare notes with even the most successful in the other professions.

* From a lecture delivered before the Young Men's Christian Association, Charlottetown, P. E. Island, on Thursday evening, January 17th, 1884, by Hon. Donald Ferguson, Provincial Secretary, etc., etc.

STATE AID FOR HIGHER EDUCATION.

One of the motives which has led the people to establish schools for higher education is the conviction that by so doing primary instruction is the better secured. It is more effectively given, more widely spread. Universities and Colleges are the foster mothers of public elementary education. Blot out the institutions for higher education of the country, and common schools would soon meet the same fate. The pupils of the one are the intelligent friends and trained instructors of the other. If the State is to undertake education at all it must do it in a self-dependent way, and not omit an essential factor. The quality of the work done in the higher branches will be the same as that done in the lower. Where the former fails the latter languishes. The two parts though utterly diverse in purpose and subject are interdependent, and the superior will in time determine the tone and character of the whole. The elementary schools of Germany are the best in the world, for the reason that they are the open doors to the real and burgher schools and the gymnasia. Primary schools in England have been a by-word, because the chasm between the great endowed English schools, colleges and universities, and the places for the instruction of the poor, is as wide as that between Lazarus and Dives. No system of public education, says Huxley, is worthy the name of national unless it creates a great educational ladder, with one end in the gutter and the other in the university. Independent of the question as to who should enter and enjoy a system of instruction at the public expense, or upon what terms, it is plain that the system should be harmonious and complete, having the means within itself for its perpetuation and support.

Another reason why legislation has established the colleges in our system is doubtless found in certain fundamental theories of our Republican government that the State should aid in the abolition of distinction of caste or class privilege, that so far as education is a means of advancement in social or political condition, the opportunity for it should be at least offered to every one without money and without price. The most precious interests of society come in time within the control of those who are born leaders of men. Many such in a community like ours have in the circumstances of their early life no influences which turn their indomitable spirits in right directions. To country lads of like qualities the idea that education is a means of power is more likely to occur than to city lads whose ambition and pride of leadership has means of gratification right at hand. The State said, years ago, they may run with a fire engine, they may lead in ward politics. Let us give them at least the chance to be rejected or accepted, as they see fit, of leading a class in a college. There may be no loss in it after all. Whereupon the State jumped the knotty question of whether higher education ought to be a public charge, and established the Free Academy.

Another impelling reason was what we may call the fact of insurance. The State incurs sundry enormous charges in the suppression and punishment of crime and the support of poverty. The idea is not novel to say that a uniform and complete system of public education tends to reduce the burden. If the argument that common school education is preventive of crime and poverty is a good one, will some one tell me why a college education is not a better? There is not a college graduate in Sing Sing to-day. It is a clear proposition of Republican government, that the greater number of the inhabitants who are intellectually cultivated, the greater the safety to the State. I am not sure that the sum of individual happiness is greater; other questions intervene—discontent, disappointment, failure—but mere public safety is enhanced not more surely by general education than by superior cultivation.—STEPHEN A. WALKER, *President of the N. Y. Board of Education.*

KRAO.—THE MISSING LINK.

The remarkable engraving given herewith has been reproduced by photography from an illustration which appeared in a late number of Judge Tourgee's enterprising magazine, *The Continent.* As to the authenticity of the original, it may be sufficient to say that *The Continent* vouches for the correctness of the portrait, which it received from Prof. E. R. Pige, of a Council Bluffs, Ia.; and we do not know but the paper will also lay claim to the honor of having evolved the above caption. The history of this missing relation is thus given:

"Mr. Carl Bock, while exploring in the wild jungles of Upper Birmah, Asia, discovered and captured a strange family of human monkeys, consisting of father, mother and daughter. The father was first caught, afterward the child, when the mother voluntarily surrendered. Mr. Bock had much trouble in getting his captives out of the country on account of the superstitions of the people. First he was opposed by the Ruler of Laos, in whose province the capture was made. The father finally died of cholera, and he was permitted to take the child with two chiefs before the King of Siam, but the mother was not allowed to go. After much parleying, he was at last required to adopt the child as his own, and give security for its good care, and then allowed to take it to England, where it was exhibited at the Royal Aquarium, Westminster, London.



Krao is seven years old, and, as will be seen from her picture, as she sits in the lap of Lieutenant Farini, is quite a beauty, notwithstanding some peculiar characteristics that might be deemed defects in a Caucasian. Unlike the usual monkey tribe, she has two hands, and two very pretty, human-looking feet; nevertheless, a double row of teeth in her mouth; pouches in her cheeks, where she stows away surplus food; and a coating of hair over her entire body and face clearly connect her with the *quadru-manna.* She speaks many words both in Malay and English; is very affection-

ate; laughs when pleased, and is very spiteful when angry. It will be seen that her legs from the knee down, and her arm from the elbow down, are quite too long for a human child; yet in her great black lustrous eyes seems to shine an intelligence far above that of the brute creation. Her ability to speak, to learn even the ways of civilization, seem to warrant the belief that she ought to be ranked with the race which cooks and prints and laughs and talks. But what shall be inferred from the marks and features which seem so emphatically to connect her with a lower order of beings?"

Our esteemed contemporary seems to have strangely over-looked other important evidence or non-evidence, which would certainly seem to connect this remarkable creature with a lower order of creation than the most debased tribes of pre-historic time. No marks of any ornaments appear on the body, either on the arms, legs, ears, or nose, and for a female to arrive at that age without some such trace of a future development would, even to the most unscientific, seem to be convincing evidence not only of a very low order of animal intellect, but even of an entirely distinct species of bipeds.

Miscellany.

MARTY'S VARIOUS MERCIES.

Nascitur non fit, is an expression that has been used once or twice already, with regard to poets and other geniuses, but I claim my rights as an inventor in first applying it to saints. Small saints, of course; not the noted ones of the earth. Such a one. for instance, as our Marty, a poor little yellow girl from the South; born of a hard mother, brought up by a stern master, harrowed by a tyrannical mistress, penniless, friendless, hopeless, utterly ignorant, yet turning into gold every trouble that touched her, by her own ineffable sweetness and patience.

Marty was not born ours. She "married on" a half-dozen years before the Proclamation, when she took our Ed for better,—one ounce,—and worse,—one pound. Ed himself was the softest, gentlest, most chicken-hearted darkey that ever lolled against the south side of a barn. He was a born musician, like half the boys on the Maryland West Shore, and could sing like a lark, whistle like a throstle, play on the banjo, the violin, and the accordian; he could rattle the bones and thum the tambourine, could entice tunes out of a hollow reed, and even compel melody from a jew's harp.

When he was about fifteen, cousin Mary Singleton's grandfather, the old General, chanced to come down on a visit, and took such a fancy to the boy that he persuaded father to let him carry him back to Annapolis as his own servant; and there Ed stayed for five years or more. According to an arrangement previously made for our people, Ed was to be free when he came of age; and when that time arrived he drifted back to the old home, though Annapolis held his heart and soul. His proximity to the Naval Academy had been a most beatific circumstance to Ed; the drill and parade fired his soul with a lofty ambition to go and do likewise, and for years after his return he was indefatigable in putting the other boys through marvellous evolutions, and training them to the most rigid military salutes. The music of the band lifted him up into the seventh heaven; but pulling off the General's boots brought him down again, for the General was of a gouty habit, and immediate of speech.

In Annapolis, Ed formed a most devoted attachment to cousin Mary and her brother Clayton, who spent much of their time with their grandfather, especially to Mary. She was a conscientious little girl, and gave up her Sunday afternoons to teaching the servants. Several of them became fair readers and somewhat cloudy writers, Ed among the others, and he never forgot her kindness.

Here, too, Ed became acquainted with Marty; her sickly, irritable mistress had come up from the Old North State to be under the care of a certain physician, and finding herself improving, made her home there for several years. She died at last, however, and with somewhat tardy gratitude, on her dying bed she set Marty free. Affairs never made a prompter connection. For Ed, having gradually become the possessor of a gun, an ax, a scoop-net, a couple of eel-spears, and an insatiable thirst for liquor as a comfortable provision for old age, patched up a small shed on the banks of Eel Creek, and brought Marty home.

Marty was a meek, patient, God-fearing little woman, full of tender care for others, and oblivious of herself. She was neat and industrious; so was Ed, when sober. She was cheerful as a sunbeam; so was Ed, both sober and drunk. She had a heavenly temper, and so had he. At least, so far as it was tested. How it would have been, had he tarried at home, borne the children, and kept the house, all in the very potsherds of poverty, while Marty genially engulfed the wages that should have furnished food and clothing, can only be conjectured.

As it was, when he took his week's wages and rowed over to the store for molasses and bacon and a quarter of a pound of tea, and came back six hours later, delightfully loquacious, without any bacon, the jug half full of rum, and a spoonful of tea loose in his pocket, Marty only listened silently to his tipsy orations, helped him to bed when he could no longer stand, and then went down on her knees, and offered her humble prayer for help, while he slept the senseless sleep of the swine. Whatever Ed left in the jug was poured out on the grass, and the last drop carefully washed away, lest the mere breath of the tempter might set him crazy again. Her mild remonstrance the next day was always met by a penitent confession of sin. Ed was drunk at least one week out of three, from the day Marty married him, straight on for six years, and was regularly remorseful after each fall from grace. He always said it was a mortal shame; that Marty was the best girl a man ever had, and Sammy the cutest young one; that he was going to quit drinking and join the church, as true as he lived and breathed and hoped to die the next minute; and Marty implicitly believed him with the matchless faith of a child. She forgave him until seventy times seven, and then went on forgiving as before. In Ed's mind, the rotation of crops was rapid; one week he sowed his wild oats and reaped them; the next, he brought forth good fruits; the third, the land lay fallow. and the fourth, was in prime condition for the wild oats again.

When Marty was clever enough to get his wages as soon as he was paid, she spent them in her own frugal way, and kept everything comfortable. But as time went on and the fearful bonds closed in tighter and stronger about the poor creature, he would steal away to the store on pay-night, without going home; and then, through shame or through reluctance to witness Marty's silent woe, hide somewhere for days till his supplies were exhausted, and come slinking home dim-eyed, shaken, sorrowful, and sure he should never drink again.

Marty came tapping at the mistress's door one April morning,—that wearied mistress, whose ear was always open to the cry of her people, even when her hands were full and her heart was heavy.

"Come in, Marty," was the ready response to the gentle knock. The door opened and Marty's smiling face shone in.

"Mornin', mistes; reckon mistes can see through the walls."

"Not quite, Marty, but I know your knock."

"Yes'm. Mis' Calvert's markin' things, an't she? Oh me, how bitiful they be, spread out here in the sunshine! Make me think of the robes of glory, they's so blindin' bright!"

And Marty went down on her knees among the piles of snowy linen, and touched them here and there caressingly.

"Marsa well, Mis' Calvert?"

"Very well, Marty; how's the baby?"

"Right smart, thank ye. Cries reel lively. Samm'y got him to hum."

"Is it safe to leave him with such a little fellow?"

"Oh, yas'm! Sammy gwine on five, and I nussed our 'Phibosheth wher I was three."

"Where's Ed, to-day?"

"Couldn't tell, mistes," Marty answered softly; "hain't seen him sence Sunday."

Mother looked up inquiringly.

"Yas'm," continued Marty, "that's it. Got gwine agi'n. Promised me Friday he'd never touch another drop, and airly Sunday he was off."

"I wonder that you can bear it as you do, Marty; Ed is drunk half the time."

"Yas'm. Reckon 't is about that. Kind o' tryin' in the long run. Sort o' s'cumvents a critter. Jes' think you're gwine to spar' a dollar or two fer an ap'on or a pair o' shoes, and it's all gone. But Ed's a dretful pleasant boy, Mis' Calvert knows," she went on soothingly, as if to soften mother's disapproval. "I'count Ed as one o' my chiefest marcies; an't a speck like me, with my dretful masterful temper; he's mortal pleasant, Ed is. But I came up to take a little counsel with Mis' Calvert. I ben a-plottin' and a-plannin' these three days and nights. I *must* contrive to airn a little somethin' myself, or I dunno what we *will* come to."

"It is a perfect shame," said mother; "have you ever talked to him as decidedly as you ought to about this?"

"Dunno," said Marty; "I ain't much of a hand to jaw, but ef Mis' Calvert says so, I'll do it. Think I ought to try to jaw him a little?"

The question was asked with such tremulous eagerness for a negative that mother laughed, and said, "No, I fancy words are useless. So tell me your plans, Marty."

"I'm contrivin' and conjurin' fust off, to get some shingles. Our roof's like a sieve; rain drops through right lively. And then I want some shoes for the chillen agin winter. I ain't fer mutterin', with all my marcies: I could n't be so onthankful. Summer's comin' now, and we'll do fust rate. But it 'pears like I *must* git somethin' ahead before frost comes. Reckoned mebbe Mis' Calvert would let me wash and iron, this summer, or help Aunt Dolly in the kitchen. Some folks say I'm a fust fambly cooker, and I ben trained to wash and iron."

"What could you do with the baby?"

"If Mis' Calvert didn't mind, Ed would shoulder the cradle up in the morning'—Ed's sech a pleasant boy—and fetch it home ag'in at night, and Sammy'd rock it. It's sech a marcy I got Sammy! Allers did reckon him a gret mercy! If Mis' Calvert didn't want the cradle in the back kitchen, it could stand in the shed."

"You may come, then, on Monday, and I'll find something for you to do."

"Yas'm. Thank ye, marm, thousand times. I 'spected 't would be jes' so. Mis' Calvert allers so clever to us. It's a dretful marcy to have sech a kind mistes. But I had another plan, too. I was gwine to buy a shote, and fat it, and kill it in the fall for pork. Buy a shote now for two dollars, and ye can sell him bumbye fer twelve, if he's right fat. But I got to airn the money to buy him, and I was gwine to airn by havin' a party. Mis' Calvert ever heerd of these new kinds of parties they have over to Squaw Neck? Pay-parties, they call 'em."

"No, Marty, I never have."

"Reel smart notion. Jed's Maria, she gin a pay-party and made enough to shingle her roof; and Ruth Jake, after Jake died, she fetched her'n up to five dollars over what it cost her to bury Jake. Folks pay twenty-five cents to come in, and gits their supper and dancin' fer that. Then one o' the fambly keeps a table in the corner with goodies on it, candy and store-nuts and root-beer, and them that wants 'em comes and buys. Mis' Calvert don't see no harm in it, eh, Mis' Calvert?"

"None at all," said mother, smiling in spite of herself at this novel combination of pleasure and profit.

"Yas'm; glad of that, 'cause I reckoned it a reel marcy that somebody thought onto 'em. Reckon we'll have it in a couple of weeks, when the weather's warmer, an before the shotes git sca'ce. If Ed'll keep good and stiddy till then, we'll have bitiful one." And Marty rose to go.

"What a trial he is to you, Marty!"

"No marm, not so much as ye think. He's a dretful pleasant boy. I want to tell Mis' Calvert somethin'." And Marty came a little nearer and spoke very gently. "My old mistes warn't soft lil e Mis' Calvert; but then she was ailin'. But then Mis' Calvert's ailin' most of the time, too. But my old mistes hadn't got religion, and Mis' Calvert has. My old mitty warn't pious a mite, and I was dead sot on gwine to meetin'. I s'pose I bothered her, fer she turned round on me right sudden one day, and says she, 'Go to meetin' to-night, ye hussy, and then hold your tongue about it; if ye ask me ag'in fer a year, I'll have ye whipped.' So I went, glad enough, and I crep' right up by whar the minister stands, so as not to lose a mite, and I had n't sot thar but a little spell when he began to read out of the big gold Bible, and true as ye lives, mistes, every mortal verse was about the Lord's marcy enduring forever. When he'd read it two or three times, says I, 'That's fer ye, Marty, ye poor sinner, that's allers forgittin' the Lord's goodness;' and when he'd read it two ar three more times, says I, 'Praise the Lord now, Marty, for sendin' ye sech comfort, fer whether ye come to church ag'in in a year, or never, ye've got somethin' to stand by all yer life and on yer dyin' bed!' And when he'd read it a few times more I got down on my knees, and says I, 'Bran' it in, Lord, so I'll never lose the mark on it,' and on my knees I stayed, prayin' it over and over ag'in, till the minister shet the book. It's ben a dretful comfort to me every way, Mis' Calvert; it makes me feel that if the Lord has such long patience with folks, it ain't fer sech as me to be mutterin' and hectorin'.

The mistress looked up into Marty's eyes with a thoughtful smile, and they smiled back full of trust and sympathy, for divided as they were by every social distinction of birth, fortune, beauty, and culture, they were one in that fellowship which outlasts even death, bound with the sacred tie which binds those who have one Lord and one faith.

The next Monday, and every Monday after, arrived Marty's procession, early and always in the same order: Ed first, head erect, cradle shouldered, feet marching true to the tune he was miraculously whistling. Marty next, radiant with the prospect of a proximate party and ultimate shingles, cuddling the baby as she came. Sammy in the rear, whistling like his father, and straining every nerve to make his ducky-daddles of legs march in time; a futile effort, which had to be supplemented by most unmartial leaps, every few steps.

Marty regarded Sammy as one of her chief mercies, but his life was not unclouded radiance to himself; it vibrated between bliss and woe, and swung from lustrous morn to murky night, or back again, according as that wad of a black-and-tan baby waked or slept. Baby asleep, Sammy was sovereign of the universe; he could build cob-houses in the smoke-house, dabble in the pond with the ducks, hang over the fence of the pig-pen balanced on his unsusceptible stomach, worm in and out of the delightful intricacies of the woodpile, or roll in the chips with a squad of small idlers. Baby awake. Sammy was a mule on a treadmill. He was not allowed to hold it, for owing to its being such an undefined lump, without any particular projections to seize upon, he had twice let it slip through his arms upon the floor; so it was deposited in the huge wooden cradle near Marty's tubs or ironing table, and he was set to rock it.

Sammy always began with cheerful vigor, resolved to compel slumber to its eyes; he stood up to his work like a man, taking hold of the cradle-top with both hands, and rocking vehemently. Sammy approved of short methods with babies. After half an hour or so of this exercise, baby's eyes growing constantly bigger, and brighter, he grew less sanguine, aud made preparations for a longer seige. He brought a wooden block to the side of the cradle and sat down to the business, not cheerful, but resolute; pushing the cradle with one hand, and holding in the other a piece of bread or a cold potato, out of which he took small, slow, consolatory bites. But the smallest, most infrequent nibbles will finally consume the very largest potato, and this source of comfort exhausted, and another half-hour having dragged away, and baby's eyes still staring with superhuman vivacity, Sammy wheeled about with his side to the cradle, leaned against the leg of the ironing table in deep depression of spirits, seeking to beguile the weary time by counting the dishes on the dresser or the flies on the ceiling; while at intervals of a few seconds he bestowed such wrathful, sidewise thwacks with his knee on the cradle, as made the whole huge structure tremble, and its gelatinous occupant quiver.

But in the last stages of the conflict, Sammy left all hope behind, and became an image of the profoundest dejection. Turning his back on the cradle in disgust too deep for words, he would lean his elbows on the table and his head in his hands; with his bare foot he loathingly kicked up the rocker behind him, while one jig-tune after another came gurgling melodiously out of his melancholy mouth to the expressive words of "Diddledy, diddledy, diddledy, didy," and the big tears rolled down unchecked. Sammy was too far gone to wipe them away. Meantime the complacent baby gazed wisely at its rocking dome, the flies buzzed, the clock ticked, the tears fell, the jig-tunes went endlessly on, till Sammy's head drooped, and the "Diddledy, didy" grew faint, and fainter, and failed, and the poor little drudge was on the very verge of blessed oblivion, when an imperious wail from the baby recalled him to life and labor once more.

"Come now, Sammy," Marty would say encouragingly, every day, when matters came to the worst, "rock away like a gent'lum. Sech a marcy ye got that cradle! S'pose ye had to lug him, like I lugged our 'Phibosheth gwine on two year! Mammy's tryin' to airn shoes for ye, and can't do it nohow, if ye don't nuss the baby!

And what's more, bumbye, when we have our pay-party, ye shall come to it, ye shall, and have goodies, and set up late."

This would reanimate Sammy for a minute or two, and when sleep finally overtook the baby he darted away like a liberated hare; wild leap after leap carried him to the thither confines of the woodpile, and Elysium began.

"Time's a-gwine," said Marty mildly one May morning to mother; "shotes is gittin' sca'cer, and that 'ere pay-party don't 'pear to come off. Have to give out fer it a week ahead, so as to let the Folks at Squaw Neck and Tuckappoos have a warnin'. I would 'a 'gin out fer it last week, but Ed got high, and now, this week, Mother Honner's ailin'. She was gwine to do fer me, and smart up the house; things gits so muxed whar young ones is kitin' round. Mis' Calvert ain't got somethin' to cure Mother Honner, eh, Mis' Calvert?"

"I don't know but I have," said mother, "if you can tell me how she feels sick."

Marty described the symptoms, and was furnished with a simple remedy, but Hannah did not recover in time for the invitations to be given out that week. In fact, she grew much worse. "'Pears to be reel racked," said Marty, "and she's got a desp'it pain across her; she 'spects it's the medicine."

"That is impossible," said mother; "It was a very harmless remedy I gave her."

"Yas'm, so she 'spected. She never took Mis' Calvert's doctor-stuff; she reckoned she wanted a right smart dose of somethin' that would strike clar through, so she took a box of stomick-pills she bought off a pedlar-man last fall; eighteen in the box; she took 'em all; I reckon she overdone; Mis' Calvert reckon so too?"

But what the mistress reckoned was too wide and deep to put into words. Hannah recovered from her corporeal earthquake in the course of a week or two, and Marty's plans were ripe for execution, when Ed suddenly fell from grace again.

"I dunno," said Marty serenely, "as I ever felt so beat. Shotes is about gone. Jes' git my mind sot for that 'ere pay-party, and somethin' knocks the roost right out from under me. I don't want to fret, with all the marcies I have, and everythin' gittin' along so comfort'able this summer, and Ed such a pleasant boy too,—not a mite like me; I allers was a stiff-necked critter, that's why I git so sot on things,—but it makes me feel putty beat."

"Never mind the pig, Marty," said mother, "I don't believe you would have made much out of it. Why not have the party when it is convenient, and take what you make toward your roof?"

"Wal, I never!" said Marty. "Be sure I can! I was so shallow, I got it fixed in my head that 'twas no use to have the party when shotes was gone! We'll have it, I reckon, as soon as things gits to rights."

(To be Continued.)

UNCOMMON PROCEEDING.

"How cold it is growing," said Miss Wait, the teacher of the common school in the then brisk little manufacturing village of Shattuckville, Franklin county, Mass., as she tied on her soft blue hood, buttoned her warm flannel cloak, looked at the window fastenings of the not over commodious or attractive, but snug school-room, locked her desks, and carefully shut the damper of the air-tight wood stove, preparatory to quitting her domain of labor for the night.

As she picked up her rubber overshoes and stooped to draw them over her shapely kid boot, she cogitated: "Oh, dear! Tommy Howe's red toes sticking so pathetically through those old gaping shoes fairly haunt's me. I wonder if, in all this prosperous, busy village, there is no way of getting that poor child decently clad. I must think it over and see what I can do about it."

Twenty-four hours later the leading man of the village, and the owner of the little factory there, who, years before, when a poor boy, had stranded down from Vermont to this little hamlet, eccentric and brusque, kind-hearted, keen-eyed, and observant of all that was going on within his domain, was walking along the street and met a bright-eyed and sprightly lad of ten speeding ahead with that amusingly unconscious, consequential air that a boy carries with his first brand-new pair of boots.

Old Sam Whittier, as this gentleman was familiarly called, not by reason of advanced age by all means, but because of his supremacy as the mill owner and employer of all the help in the hamlet, took in the situation at a glance, and called out to the absorbed child:

"Hullo, youngster! where d'ye get them fellows?"

"Teacher gave them to me, sir," and the lad's tattered cap came quickly off, and he stood with it in his hand.

"Does she buy boots for all the boys in the school?" was growled out.

"Guess not; but she bought Joe Briggs a speller and Jane Cass an arithmetic, and she gives away stacks of slate pencils and paper and ink, and such."

"What made her go and buy them boots for you?"

"She said she wanted to, sir; and when I said I had no money to pay her for them, she said she would rather be paid in perfect lessons; and I will try to pay for them in that way, you may be sure, sir."

"Pretty good sort of a teacher, is she, bub?"

"Oh, yes, indeed, I guess she must be the best teacher that ever lived, sir—she tells about so many things that we never knew before; and she wants us to be good and honest, and not tell lies, and she says we shall be men and women by and by, and she wants us boys to know something, so we can own factories our own selves some time. The other teachers we've had only heard our lessons and let us go; but she's so different!"

"Well, bub, I shall have to think this business over a little. Now run along, and go to scratchin' over them perfect lessons. I don't suppose you'll find a person in Shattuckville a better judge of perfect lessons, or how much they are worth, both to the teacher and to the scholar, than 'Old Sam Whittier.' So, bub, look after your books, and I shall look after you."

The next morning a little note, written in a coarse business hand, was dispatched to the teacher by the hand of one of the children. It ran as follows:

"Miss Wait: I have heard of some rather uncommon proceedings on your part of a teacher toward your scholars. I would like to inquire of you personally as to particulars. Will you do me the favor to run over to my house directly this afternoon.

"Samuel Whittier"

"What can I have done?" thought the little teacher, in such a perturbed state of mind that she corrected Johnny Snow's mistake in his multiplication, by telling him seven times nine was fifty-four; indeed, she let the mistake go so long that every little hand belonging to the second primary class was stretched up in a frenzy of excitement. "Let me see; what is it I have done the past week? I switched Bobby Baker pretty smartly, to be sure—and I kept Sam Woodruff after school—and I kept Marion Fisk in from recess for whispering; but I must keep order. Well, dear me, I have tried to do my duty, and I won't worry;" and Miss Wait resolutely went back to "seven times nine," and so proceeded in the usual routine. But she ate no dinner that noon, and had a decided headache as she crossed the big bridge over the mill stream and over the hill to the mill owner's residence.

"I shall not back down in any thing where my clear duty and self-respect are involved," thought she. "I have set up a certain idea as to what a teacher of these little common schools ought to be, and I will, God and my mind, good courage and health not forsaking me, bring myself as near to it as possible. Moreover, I will not consider, in the premises, whether the scholars are children of the rich or learned, or of the poor or ignorant. For the time being God has placed in my care ragged, dirty little wretches of a factory village, as well as clean, well-dressed, attractive children."

"Good evening, good evening, ma'am," said "Old Sam Whittier,"

in his gruff way, meeting the teacher at the door. "As I said in my note to you, I heard to day of some rather uncommon proceedings on your part. I saw ma'am, little Tommy Howe in a new pair of boots this morning. Do you know how he came by them?"

"I bought them for him, Mr Whittier," wondering whether the local magnate suspected the poor child of stealing.

"Oh you did. Are you in the habit of furnishing your scholars with such articles? Was the providing of boots a part of your business contract with the committee? If it was, I can put you in the way of buying boots at wholesale in Boston, where I get my supply for my store."

"It will not be necessary sir," replied the teacher, with dignity.

"I thank you for your kind offer, however."

"Why do you furnish boots in this particular case, if I may inquire?"

"The lad is very poor. His mother has her hand, heart and brain full with the smaller children. Tommy is learning rapidly; I see marks of rare intelligence in him. It would be a pity to have him taken out of school at this time when he is so much engaged. Should he continue coming clad as he was, in such weather as this, he would be ill soon. I could not take the risk in either case.

"Are you able to let your heart get the better of you in this way?"

"I have my wages only," replied the young woman, still with dignity,

"Then you probably will have to retrench not a little in own expenses."

"If I do, it will harm no one's purse or pride but my own. In this instance it may be the matter of a pair of gloves or an ostrich tip with me. With him the little act may make a difference that shall be lasting through time and eternity."

"You have been attending that school over at South Hadley, I hear."

"Yes sir."

"Have you been through it, or graduated as they call it?"

"Oh, no; I have attended but two terms. But I am fully determined to complete the course."

"Hum—all right. Miss Wait, you seem to be doing some good work among the children over the river there. I am going to think it all over; but look here—if any more of those little rascals need boots let me know. I shall consider it a privilege to provide them. You know I can get them at wholesale—ha! ha!" and the now greatly relieved teacher's interview with the mill owner ended.

"If she goes on teaching on and off, and then taking a turn on and off, at Mount Holyoke, she can't graduate for years to come," ruminated "Old Sam Whittier" as he watched her tripping on over the hill; "it's ridiculous."

And so it came to pass, when Miss Wait was paid her meager salary at the close of the term, she found in the envelope containing the order on the town treasurer a cheque with a slip of paper pinned to it reading thus:

"This may be an uncommon proceeding; but I thought it over, and have come to the conclusion that you had better go right along in your studies at South Hadley until you graduate. After that, with your pluck and principle you will be able to invest in boots or books, or in any other way you see fit. "Very truly yours,

SAMUEL WHITTIER."

I leave this true little sketch without comment. It carries its own lesson, both to struggling young teachers with heart and brain, and to prosperous men of affairs who may lend a helping hand to deserving ones.—*Pensylvania School Journal.*

ANDERSON THE WIZARD, SOLD BY A YANKEE.

Professor Anderson was looking over the American and foreign newspapers in the office of the New York *Dutchman*, when he saw he was closely scrutinized by a gentleman of tall stature and swarthy appearance, who was evidently from the country. The following conversation took place:

"I say! are you Professor Anderson, eh?"

"Yes, sir."

"Wal, you're a tarnation smart man, I hear; you aint got that are bottle of yourn with ye—have you?"

"No, sir."

"Wal, I'm from down East, having been raised in Maine, and I should like to purchase a duplicate of that are bottle, as I am going out stumping for———. I guess if I had your bottle or its twin brother, I'd soon swamp the Scotties, without talking politics either!"

"I never carry my bottle with me, nor have I a duplicate of it."

"Sorry for that, sir," said the—stumper. "However" he continued, "I was once taught a trick when a boy, but I almost forget how the thing was done, now. I'll tell you how it was, stranger, as near as I can. I used to take a red cent and change it into a ten-dollar gold piece."

"Oh," said the professor, "that is quite simple, a mere trick of slight of hand."

"Wal, I know it's not very difficult, but as I forgot how, will you show me?" at the same time handing a cent to the wizard.

"Oh, yes, sir, if it will oblige you, I will show you in a moment. Hold out your hand, said the wizard. "This is your cent is it not?"

"Yes, sir."

"Close your hand."

The down Easter closed his hand fast.

"Are you sure you have it?" said the wizard.

"I guess I have, and I'll bet a dollar you can't change it into a ten-dollar gold piece."

"Done!" said the wizard. "Now hold fast!"

"Yes, sir! I reckon I will—but stop! down with your dollar! here is mine!" said the Yankee.

The wizard covered his dollar.

"Now, sir, are you ready?" said the wizard.

"I aint nothing else!" said the down Easter.

"Change!" said the wizard. "Now, sir, open your hand." He did so, and to his utter astonishment, he held a *bona fide* ten-dollar gold piece.

"Well, sir," said the wizard, "You see you have lost your dollar!"

"I guess I have!" said he, handing over the two dollars.

"Now," said the professor, "I'll bet you another dollar I'll change the ten-dollar piece into your cent again, much quicker."

"No, yer don't!" said the agent from Maine, placing the ten dollars in his pocket and buttoning up tight. "I'm much obliged to you perfessor, but I reckon I'll leave it as it is! Good morning, old hoss?" said he, walking out of the office; and, turning round as he reached the door, he placed his digitals in close approximation to his proboscis saying: "I guess their aint anything green about this child!" and left the professor in utter amazement at his coolness.

HOW HE CAME TO "SWEAR OFF."

"No, I won't drink with you to-day, boys," said a drummer to several companions, as they settled down in a smoking car and passed the bottle. "The fact is, boys, I've quit drinking—I've sworn off." He was greeted with laughter by the jolly crowd around him; they put the bottle under his nose and indulged in many jokes at his expense but he refused to drink, and was rather serious about it. "What's the matter with you, old boy?" sang out one. "If you've quit drinking, something's up; tell us what it is." "Well, boys, I will, though I know you'll laugh at me. But I'll tell you, all the same. I have been a drinking man all my life, ever since I was married, as you all know I love whiskey—it's as sweet in my mouth as sugar—and God only knows how I'll quit it. For seven years not a day has passed over my head that I didn't have at least one drink. But I am done. Yesterday I was in Chicaga. Down on South Clark street a customer of mine keeps a pawn shop in connection with his other business. I called on him, and while I was there a young man of not more than 25, wearing threadbare clothes, and looking as hard as if he hadn't seen a sober day for a month, came in with a little package in his hand. Tremblingly he unwrapped it, and handed the article to the pawnbroker, saying: 'Give me 10 cents.' And, boys, what do you suppose it was? A pair of baby shoes, little things with the buttons

only a trifle soiled, as if they had been worn only once or twice. 'Where did you get these?' asked the pawnbroker. 'Got 'em at home,' replied the man, who had an intelligent face and the manner of a gentleman, despite his sad condition. 'My—my wife bought them for our baby. Give me ten cents for 'em—I want a drink.' 'You had better take the shoes back to your wife; the baby will need them,' said the pawnbroker. 'No s-she won't because—because she's dead. She's lying at home now—died last night.' As he said this the poor fellow broke down, bowed his head on the showcase and cried like a child. Boys" said the drummer, "you can laugh if you please, but I—I have a baby of my own at home, and I swear I'll never drink another drop." Then he got up and went into another car. His companions glanced at each other in silence; no one laughed; the bottle disappeared, and soon each was sitting in a seat by himself reading a newspaper.

Practical Department.

THE GLORY OF TEACHING A-B-C.

Possibly it may serve to encourage us who toil on *this* side of the Atlantic, to know that our co-workers on the *other* side experience rather more difficulties, and toil under less favorable circumstances, than do we. The following was clipped from a recent copy of an English paper. F.

We have received from an eminent member of a provincial school board the following notes of an "examination day":

Mixed girls' and infants' school. Time fixed for examination sharp 9 a.m. At 10.15 H.M.'s Inspector enters hastily; children stand. H.M.'s Inspector leisurely divests himself of coat, hat, etc., which he deposits on the girls' needlework, and throws his bag on the harmonium. Puts on coat again. "This school-room is much too cold; shut all the doors and windows." Proceeds to examine registers, summary, logbook, etc., with his back to the children, turning round occasionally with, "There's a child there not attending to me," or "If that girl with a squint looks about her any more I won't examine her." At eleven o'clock: "Oh? how many pupil-teachers have you? Four, eh? Well, let all give a collective lesson to the whole school; subject, a cocked hat, or a pair of garters; or if they don't know what *they* are, the great sea-serpent, or Barnum's white elephant. Whoever finishes first shall have extra marks." About 11.30 begins to examine the school; gives dictation to Standard II. in a low and rapid tone so that they do not catch half he says,—"As a fierce lion was prowling about in search of prey." At the same time he reads from a card a sum for another class,—"If 17 couple of fat ducks sell for 3*s.* 6*d.* each, and I lose 9*s.* 0½*d.*, what shall I have left?" The second standard get puzzled, and write down, "As 17 fierce duck were prowling about, trying to sell a fat lion who had lost 9*s.* 0½*d*?" The sum was taken down something like this: "If 17 couple of lions lose 3*s.* 6*d.* each, how much prowling would be left out of 9*s.* 0½*d.*?" He "fails" them all, turns to mistress, "Your children are perfect idiots." Mistress weeps copiously. H.M.I. goes on to next class. Takes reading: "Now, boy! I'm not deaf." Children have been specially implored to "speak up for the inspector.' "Now, that girl,—no, not you, the one next but five,—tell me the meaning of a concatenation of events? Now don't be a week over it." Girl doesn't know. "Then you are a stupid dolt! Can't you tell me anything about it? Is it about a cat or a nation, or what?" "Please, sir: yes, sir." "Now which do you mean?" *Girl:* "Please, sir: no, sir!" "Fails" her. Takes a class in geography: "Now, all stand,—oh! you were standing,—and look at me. That girl with red hair, tell me the exact distance in English miles from Dan to Beersheba." *Girl:* "Please, sir, it the other class learns the colonies,—not us." Mistress mentally resolves to give her "what for" presently.

Twelve o'clock strikes. *H.M.I.*, cheerfully: "Now I'll examine the infants." (*sotto voce*: "I almost think I shall catch that train:") *Mistress:* "Please, sir, they're all crying, sir, they're so tired of standing." *H.M.I.:* "I can't help that; let them sing, 'Oh, how we love inspection day!' and meanwhile show me your 'appropriate and varied occupations.' How many girls have you among the elder infants who can turn topple-tail *accurately?* and how many boys who answer to the name Mary, and can knit comforters? What proportion of this class brings pocket-handkerchiefs, and how many, if any, use them, except to clean their slates? How many books have the three-year-olds read through this week, and can the whole school do Swiss darning?" *Mistress:* "Please, sir"——*H.M.I.:* "Now, I don't want any opinion from you. I'm here to inspect this school, not to hear what *you* think about it." (Song ended.) "Well, that's fairly good; only I can make out neither words nor tune. Can they all say, 'A little cock-robin sat on a tree,' and 'A storm in a teapot,' and all 'Thompson's Seasons,' and 'Meddlesome Mattie' from beginning to end without a mistake? Oh! if they can't do *that* I shall recommend the withdrawal of one-half of the grant; (*sotto voce:*) "I shall catch the 12.35 train, I do believe." Exit, forgetting to take away any of the papers, and to examine the needlework, writing, and singing.

THE TEACHING OF HISTORY.—If history must be taught to children, it would be more practical, if not more sensible, to begin with the reign of Queen Victoria and go backward according to periods. About three-fourths of our children leave school under the impression that English history ceased either at the date of the battle of Hastings, or at the end of the Wars of the Roses. The effort (to teach history on this plan) amounts to a *reductio ad absurdum.*

For all the higher purposes contemplated in the study, a thorough acquaintance with the state of England in one or two of the most eventful periods is of far more value than a superficial knowledge of the entire history. The latter may be forgotten. There is no germinating power in it; it will neither grow when the pupil carries it with him into the world of books and of news and of conversation, nor furnish material for reflection in solitary hours; but the former serves as a nucleus for future acquirement.—*Extracts from Reports of English Inspectors.*

A writer in the English *Journal of Education*, alluding to Mr. Freeman's *Historical Course for Schools*, says: "If Mr. Freeman, with his very great power, when he has space enough, of presenting forcibly and bringing past and present into mutually explanatory relations, could only have had a short years's experience as teacher of an average large form, how different a book would he have written! He would have learned at once, when he was sailing hopelessly overhead, when he was bewildering by hosts of unknown names, how necessary it is that there should be some heart, some human touch, in all teaching for the young. We must not, as we value our subject, blink the fact that we cannot go fast and give details. We must always be drawing an artistic picture." Boston has had some experience with one of Mr. Freeman's historical works for schools, and the result was an almost unanimous contempt for the work as a text-book. But when the masters of the schools, with almost the same unanimity, asked for a text-book treating the same subject, edited by one of its successful teachers, the school board replied by a deliberate refusal. It is probably the same in England as here,—school boards seem to think a teacher with his harness on has not inventive genius enough to manufacture, or even improve, the machinery which aids him in his work. Let him but throw that off, however, become a projector of conventions, or a Bohemian, and he at once becomes a successful author.

Superintendent Harrington, of New Bedford, speaking of the teaching of history, says, "I would throw away the text-books altogether, *as such*, and take the subject wholly out of the list of text-book studies. I would let no stated formal examinations lie in wait for it,—those premiums on narrow, technical teaching. The teachers should be free from every trammel,—free to make the instruction so delightful and winning as it may lie within their ability to accomplish. There should be no tasking study connected with it,—none whatever. It should be imparted by means of a carefully-selected course of reading, by visible illustrations, and by quickening oral information out of the stores of the teacher's personal intelligence. Biography, which has well been termed the soul of history, should play a prominent part. Youth turns to it by an instinctive proclivity, preferring it to other channels of literature, and by a fortunate coincidence it is the one effective medium through which the ethics of history, which gives it its chief value, can be placed in bold relief." It "illustrates as nothing else can do the triumphs of virtue and the humilations of vice."

Eloquently expressed, and the frozen truth! But then, at the end of a term, or a year, comes along the written examination,—the measuring-rod of the chief of the bureau of statistics,—and finds, of course, neither inches nor furlongs, neither multiplier nor dividend. Art he cannot measure; ethics he cannot weigh; growth is not a subject for percentage; and so the instruction, of course, is a failure, and the reputation of the teacher at a discount. Happy is he whose examiner is not the "chief of a bureau of statistics!"—*N. Y. Journal of Education.*

Paul Bert, the former Minister of Public Instruction in France, bemoans the neglect of contemporary history in the public schools, which appeared on the occasion of different examinations. He writes: "The scholars could not tell what department was taken from us in 1870, what river is the eastern boundary of France, what Colmar, Metz, and Strasburg were. One girl could not answer when asked what was Alsace Lorraine; a second child triumphantly replied, "It is a province which Prussia lost 1879." M. Bert asks that, instead of giving the history of the Egyptian kings, especially of the oldest times in the public schools, the history of modern times should be given. The criticism might be made in other countries than France.

PRACTICAL CROSS-QUESTIONING.

We consider the following illustrations on the subject of cross-questioning pat, and so give them to our readers. They appeared in the February number of the Ohio Educational Journal.

A boy is reciting a lesson in grammar, and says, "It is a declarative sentence." It was a declarative sentence, and the direct-examiner (his teacher) was proceeding to the next point, when a visitor asked, "What is a declarative sentence?" "A declarative sentence is one that declares something." "What do you mean when you say 'it declares something?'" "I don't know." (This answer was correct.) "Make a declarative sentence." "Shut the door." He had the shell but not the kernel.

Class in Geography: T. "What is an island?" P. "An island is a body of land surrounded by water." Then the visitor inquires: "How large do you suppose an island to be?" P. "I don't know." V. "As large as the school yard?" P. "Larger." V. "As large as our village?" P. "May be so." V. "As large as ——— County?" P. "Oh, no; not so large as that."

Again: "What are meridians?" P. "Meridians, etc." (Correctly answered.) V. "How many meridians are there?" P. "I have never counted them." V. "Could you count them?" P. "Yes, sir." V. "Where?" P. "Upon the map." V. "Are there any meridians passing through this village?" P. "I think not; I have never seen any." V. "Are there any passing through this room?" P. "No, sir," etc., till it was perfectly plain that the pupil possessed the words of the text, and *nothing else.*

DISCIPLINE.

Last June I visited an old friend who has a private school on the banks of the Hudson. I found the boys assembled in a neat school-room, and everything was in excellent order. At the close of the morning exercises the principal read off a list of delinquents and the punishment:

John Jones, late: 20 minutes.

Henry Smith, disorder: 30 minutes.

Peter Thompson, staying out too long: 10 minutes.

Then school was dismissed.

"What are the delinquents to do?" I said, seeing all marched out.

"Come and see," said the principal.

Near by was a shed, with a wide piazza. Here the delinquents came, and each seized a gun and shouldered it (looking at the clock), began to parade up and down in a soldier-like manner, saluting the principal when they passed him.

"My assistant will supervise them—but they need little."

"Do they like it?"

"No, nor do they dislike it; they know that it does them good."

"Does it cause them to refrain from disorder, etc.?"

"Oh, yes! you saw the disorder; I have really nothing to complain of."

"In what does the excellence of this 'standing guard' consist?"

"The boys march up and down in a certain way; they repeat a good exercise until it becomes a habit. Now, a good habit, as of standing straight and carrying one's self properly, reverts on the mind. If it was something useless or degrading, it would have a bad effect. When the weather is fine there are places where they 'stand guard' out of doors."

Speaking of this to another teacher, he says: "I have a similar plan. I believe that it is important to get the body into habits of doing things right. I punish a boy by requiring him to march up and down, standing in the very best attitude possible. He must make his turns in military style. If he fails after fifty marchings, the penalty is doubled. Then again I have a boy walk up on the stage and make a bow to an imaginary audience, ten, twenty, or thirty times. Then they practice coming in, shutting the door, and sitting down in a graceful way, ten, twenty, or thirty times. Then they draw on the blackboard parallel marks two inches long, at the distance of one inch from each other. (This is susceptible of many variations.) All that is given out is physical or semi-physical and *trains* the individual. I find he grows in obedience. He gets his powers into submission to habit."

This subject is very suggestive, it seems to me; it certainly needs investigation. I have learned not to give out lessons as a punishment; it fails to *train*, and it causes dislike of study.—*N. Y. School Journal.*

LESSONS IN LANGUAGE.

The teacher may write them on the blackboard where they can be studied. The pupils should have little blank books in which these forms are copied, as well as others that they may notice. These will train the eyes of the pupil; he must learn to criticise himself.—ED.

"When a *person* talks like that *they* ought to be ashamed of it;" "I *hain't* forgot;" "So many *spoonfull*;" "They came to see my brother and *I*;" "Between you and *I*;" "The man *whom* they intend shall do that work;" "I thought it was *him*;" "I knew it was *her*;" "One of the balls *were* struck;" "Either of them *are* too old;" "Everybody has a right to express *their* mind;" "These kind of grapes are not good;" "I shall go and *lay* down;" "The books are *laying* on the floor;" "I *laid* abed; "He *set* on the bench till sundown;" "I should have *went*;" "You *done* wrong;" "I have *drunk*;" "They have *began*;" "They *hadn't* ought to;" "*Says* I;" and "I *says*;" "I meant to *have called* there last night;" "If you had *have* sent me word;" "I have *got* the book in my library;" "I like it *equally* as well;" "We are going to town *for* to see the pictures;" "The student said it and repeated it *again*;" "Returning *back*;" "The fruit was gathered off *of* that tree;" "I will think *on* thee, love; "More than you think *for*;" "*Who* was the proposal made to?" "He or his nephew *have* signed the paper;" "Henry or John *are* to go there to-night;" "I don't known *but what* I shall sail;" "Kate *seldom ever* uses the wrong word;" "Cold water is a *preventative*;" "Please cut it in *half*;" "She has married a man with *lots* of money;" "He got *loads* of compliments;" "They say he *enjoys bad health*;" "*Corporeal* punishment;" "The professor *learnt* us German;" "You

have *sown* this seam badly;" "The *two first* verses;" "Susan is the handsom*est* of the two;" "Mary writes as Jane would have *wrote*;" "Neither smoking *or* drinking allowed; "Her husband is *covetchus*;" "*Belov'd* brethren" and "Their daughter were beloved;" "He is *forsook*;" "Not *as* I know of;" "He has *trod* on my skirt;" "Have you *shook* the shawl?" "I only called to *price* your goods;" "He is quite as good as *me*;" "*Those people*;" "*Was* you reading just now?" "I *see* him last Monday;" "They *have broke* the window;" "Give me *them* books;" "It was not *him*; it was *me*;" "The baby *has fell* down stairs;" "There is danger of a *drouth*;" "If I *was* rich I would buy a carriage;" "I *propose* to start to-morrow;" "We conversed *together*;" "I have seen for *this* twenty years;" "*Seldom or ever*;" "He is known *through* Europe;" "The river bank is *overflown*;" "It was no use *asking* him;" "*Who may you be*;" "Five *pair* of gloves;" "I *should* think James *was* the *tallest*;" "Fairly or *no*;" "They were all *drownded*;" "This shop *to let*;" "This room is twelve *foot* long;" "He lives *at* London;" "He left his books *to* home;" "*Such another* mistake;" "Give me both *of* those books;" "He plunged *down* into the stream;" "By the *latter* end of the week;" "*Because why?*" "They covered it *over*;" "My sister called and we *both* took a walk;" "A *new pair* of shoes;" "Combined *together*;" "Send me a *dispatch*;" "He went *unbeknown* to me;" "I *lit on* this passage;" "I was *necessitated* to do it;" "*Almost no* knowledge;" "*Somewheres* in the city;" "I fear I shall *discommode* you;" "*I'm thinking* they will come;" "His conduct admits *of* no apology;" "A *gent* called to see me;" "You have no *call* to be angry;" "I *had* rather not;" "No *less* than ten persons;" "A *couple* of pounds;" "He is *noways* in fault;" "He is *like* to be;" "I am bald in comparison *to* you;" "The dinner was all eaten *up*;" "It fell *on* the floor;" "Six weeks *back*;" "Who finds him *in* money?" "Be that as it *will*;" "*Since when?*" "I saw it *in* here;" "That *ain't* right;" "My *every* hope;" "The wind *sets* that way;" "Nobody *else* but him;" "*Either* of the *three*;" "Neither the one *or* the other;" "The other *one*;" "*Above* a month;" "*Such another*;" "He was in *eminent* danger;" "Vegetables *are plenty*;" "They *mutually* loved each other;" "*Nowheres*;" "*Least wise*;" "*Up to the* scratch;" "*Down on* him;" "*Walk into him*;" "Is that *so*;" "*Did you ever?*" "*Well, I never!*"

Of course these inaccuracies are of different classes and degrees. Some of them may be excused in common talk, as betokening a kind of playful or humorous familiarity, the incorrectness being intentional, and as well understood by the speaker as the hearer.

LETTER FROM COLONEL PARKER.

Normal Park, Ill., April 14th, 1884.

In your paper of April 12th I noticed an article, "Lessons in Language," that contained a large number of grammatically incorrect sentences. The article is good, but the recommendation of the "Ed." surprises me, for I have generally read the soundest doctrine in your paper. The "Ed." says of these mistakes in language, "The teacher may write them on the blackboard, where they can be studied; the pupils should have little blank books in which these forms should be copied, as well as others that they may notice. These will train the *eyes of the pupil*; he must learn to criticise himself." (The italics are mine.)

Children learn the forms of language—both oral and written—entirely by imitation. The reason that they use incorrect language is that they have imitated the same. Reason does not enter into the learning of language until a late stage of study, if indeed there is any reason in it. Forms in speech are used because educated people use them. Now, an incorrect form makes just as distinct and lasting impression as a correct one. You and I make mistakes once in a while, not because we do not know the right forms and the rules, but because we have formed the habit. Put these forms on the blackboard, let the children copy them, and every word and letter made is stamping the inaccuracies deeper and deeper in their minds. There are some faults that do not need ready-made examples. It is just as proper and right to swear, steal, or get drunk, as examples for children "to copy on their slates," as to have them copy verbal errors. Every word mispronounced, every word misspelled fixes the form in the mind. I know the old belief, and have the best works on false syntax in my library, but I thought such nonsense had passed out of progressive school journals. The advocates of the plan are not wanting. I well remember hearing an old master urge the use of false syntax. "I would write it on the board," said he, with great stress, "and I would leave it there for the children to read and read, until they could remember every word. For," said he,

> "'Vice is a monster of such hideous mein,
> To be hated needs but to be *seen*.'"

With his arm swinging in mid air he stopped; the sentiment of the last two lines did not seem so very appropriate:—

> "And seen *too oft*, familiar with its face,
> We first endure, then pity, then *embrace*."

I embrace this opportunity to make my first criticism on your paper.

F. W. PARKER.

[The suggestion at the head of the article was made at the request of a subscriber who had used the inaccuracies, and was intended merely to hint a method of employing them. In the course of study for the public schools of this city, for example, there is a direction for the correction of false syntax, and so in most cities. The plan of correcting false syntax is an old one, and hard to dislodge. With less and less faith in the efficacy of lists of inaccurracies (for pupils,) there is a steady demand for them. Col. Parker states the principle so strongly that there is nothing more to be said. Let inaccuracies be noted by the teacher and let these be stated to the class and the correct form given. The point is that *much* must be made of the correct form, and *little* of the incorrect one.—Ed].

GOVERNMENT SCHOOLS IN FRANCE.

SIR,—I have just had a chat with a French schoolmaster on the subject of elementary education in England and France, and I thought that perhaps your readers would be glad to know something about elementary schools here. I shall confine myself this time to mentioning a few points in which it would be well for the English Government to imitate that of the French.

(*a*) In France there are no schools fees. Education is free. Children who can, pay for their books; those who cannot are supplied by the Government.

(*b*) Attendance at school is compulsory from seven years of age to thirteen. *Every child* must attend a school. If a child is absent four times in *a month*, it is excused. If five times, it is reported to the committee. The parent is cautioned the first time, fined the second time, and sent to prison the third. Would not English schoolmasters bless such a state of things? The consequence of this strict rule is that there is no trouble whatever about the attendance.

(*c*) Private schools are to a certain extent under State control. They must be conducted according to the Education Act.

(*d*) There is inspection, *but no payment by results.*

(*e*) There are no pupil teachers in France. Teachers commence generally when they are eighteen years of age, after receiving a

certificate at the end of three years' training in college. Certificates are also granted to persons who do not enter into training college.

(*f*) Appointments are made by Government, and not by committee as in England. After an inspection reports are made, but the school masters do not see them. A teacher here finds out how he has succeeded in his examination in one out of three ways. If he wakes up in the morning to find a letter from the Government informing him that he is to be promoted, he knows he has done well. If he passes many years in the same school *hoping* for promotion, he discovers that the Inspector does not think very much of him. If he is sent to a smaller school, he justly concludes that he may as well give up his pedagogic ghost. I prefer the English style to that.

(*g*) Fifty children in a school require a certificated teacher. Fifty-one require an additional assistant (certificated, of course). The latter counts for thirty children.

(*h*) After twenty-five years of service the teacher retires *from business*, and receives a pension amounting to the half of the salary he received when he resigned. My friends, what do you think of that? In England, Paradise Lost; in France, Paradise Regained.

(*i*) During school hours the gates are locked, and no one is allowed to enter the school, except teachers, Inspector, doctor, and the Mayor. If the teacher is caught with any one else over thirteen years of age in the school, he is severely reprimanded. Good, is it not?

I must not write any more, or your readers will get angry to think that a few miles from their schools there are teachers who enjoy such advantages.

Of course, French school teaching is not without its trials; but a comparison with the English style would make an English teacher wish he could be transformed into a French instituteur.

When your readers have recovered from this shock, I will give them another dose, if time will permit.—*English Exchange.*

WILLIAM JONES, Havre.

THINGS FOR TEACHERS TO REMEMBER.

Remember, 1st, that in teaching, as well as in any other business, you must have a good deal of capital invested to obtain large proceeds.

2nd. Remember that your capital is your health, your education, your library, your determination to brighten and improve yourself, and your power to teach others.

3rd. Remember that every good business man seeks to enlarge his business each year, by constantly investing more capital.

4th. Remember that good business men watch the market; they mark what others are doing, note how they do it, and take papers and journals that give specific information. You will be very short-sighted if you do not imitate their example.

5th. Business men often meet and consult—they have exchanges, boards of trade, hold fairs, etc. Teachers who do not pursue a similar line of conduct have themselves to blame when they fail.

6th. Remember that your work is a business in many respects, and must be conducted on business principles; that it does not consist in keeping your pupils still, and getting replies to questions, many of which you could not answer yourself.

7th. Remember that your work, if done aright, will make you a competent man or woman; it will, like any business, give you a better judgment, more information, and a wider range of thought.

8th. Remember that you ought to be more deeply interested in it every day, as every business man is in his business.

GOOD LANGUAGE.

As soon as a child begins to lisp its first broken sentence its education should begin. Habits are formed which will exist to a greater or less degree throughout life. Such being the case, the conversation of the older members of the family should be carefully guarded, lest the little ones hear and learn ungrammatical expressions and slang, which, sad to say, is so rife among our young people of the present day. The servants, with whom the children spend much of their time, should be chosen with reference to this matter. A mother should feel it her duty to point out any grammatical mistake made by them, and insist on their language being correct, respectful and devoid of slang at all times. It is exceedingly difficult to break children of habits once formed, and care in this direction will save much trouble and annoyance. One way to cultivate the use of language, and at the same time to learn of the occupations and companions of her children, is for the mother to encourage the daily narration of what they have seen, heard, and enjoyed, and the telling of their little experiences. The study of pictures, moreover, in which every child delights may be used as a great provocation of language. Children always love to look at pictures, and can almost always be induced to talk about them. This study teaches them observation, and how accurately to describe whatever they see. When stories are read to children they should be obliged to reproduce them, using as far as possible the language of the book. The memory is strengthened in this way, a habit of attention formed, and the power of expression increased. If such plans as these are systematically carried out, they will prove a wonderful help in the thorough education of a child. The constant careful teaching, and kind suggestions of parents will accomplish a work which can never be performed by study, and in after years such early home training will show itself in a ready command of language, and an easy, graceful power of conversation.—*National Presbyterian.*

My plan to produce punctuality, for years, has been to open my school in the morning with some exercise that the scholsrs would not care to lose. A lesson in music, familiar talks and lectures on different subjects, varying with the seasons of the year, and according to circumstances, always selecting something that the scholars would feel a special interest in at the time it is presented. If the teacher will make this matter a study he will find plenty of resources; the exercise will be much more pleasant than constant censuring for tardiness, and tardiness will disappear very soon, except in cases of necessity. These we must recognize.

We believe the above to be as true as gospel. The live teacher will find ways and means to accomplish each desired end. A short exercise by one of the pupils will add real zest to the attendance. Have your pupils appoint a committee to prepare the exercises of the week, you holding the action taken, subject to your approval. Make your work understood for a week ahead, and you will be surprised to see how it will stimulate to promptness.

A teacher said to us a few years ago that she could not prevent tardiness. We told her to have three pupils, respectively, bring a potato, a grater and a goblet, and say to her school at precisely nine o'clock to-morrow morning, I will show you all how to make starch. This teacher told us afterward that there was not a tardy pupil next morning.

These little things go a great ways to help remedy evils.—*School Moderator.*

"No one can know how to deal with a delinquent unless he knows all the circumstances of the case, the previous occurrences to the child during the day, the disposition of the child, and the influences with which he has been surrounded all his life."—*Langtry.*

Notes and News.

ONTARIO.

We note that Dr. Hodgins, Deputy Minister of Education announces the issue of the new volume entitled "The Educational System of Ontario, its foundation and administration, from 1844 to 1884, being a personal and historical narrative of the events of forty years." We copy the following from the prefatory note which will give some idea of what may be expected.

"The Narrative will however, include not only the period of Dr. Ryerson's incumbency of the office of chief administrator of the Education Department, but also that of his late succcssor, the Hon. Adam Crooks, the first Minister of Education. My materials are rich and ample. Not only did Dr. Ryerson entrust me with the whole of his private correspondence with Public Men and Ministers of State on educational matters, but I have also had a voluminous correspondence from time to time, with him myself on several important subjects connected with our School System. These, with various memoranda and other information will be available for the Narrative. They will more clearly illustrate than did the Story of My Life the great ability and statesmanlike qualities of the late Chief Supt. of Education as founder and administrator of our School System. Although the Narrative may be prepared in the course of a year or so, yet it is not intended to publish it just now. I believe that such a personal record will likely be of more interest to the next generation that it would be to the present—especially as so many storms and personal conflicts marked the era of Dr. Ryerson's administration creating such undue prejudice that it still lingers in the memories and exerts an undue influence on the minds of many. Time and a calm review of the whole case, and of the adverse circumstances under which our School System was founded, can alone dissipate this prejudice and do full justice to Dr. Ryerson and to those who stood by him in his efforts to place our national system of schools upon a broad, safe and comprehensive basis. Having been so intimately and confidentially connected with Dr. Ryerson for thirty-two years, in the great work of his latter life (that is since 1844), the Narrative must necessarily largely partake of a personal character—so far as he and I and others are concerned. This cannot be avoided. Besides, I alone am in a position to state or verify some facts which were mentioned in private conversation, or in his correspondence with me, and which are probably known only to myself, and to one or two other persons.

"The JOURNAL comes regularly. I consider it indispensable." L. Ruggles, Annapolis Royal, Nova Scotia.

Sylvanas Philips, Esq., B.A., late of Huntingdon, Que., has been selected as principal of the new High School in Petrolia. From Mr. Phillips' past record in the schools under his charge, we have every reason to believe that the Petrolia School Board has made a wise selection.

We copy the following from the Whitby *Gazette*:—"Mr. J. A. McLellan, Inspector of Collegiate Institutes, reported very favorably. His remarks after giving detailed statement were:—"This Institute is improving, it is now doing excellent work. All the departments are now in good hands. Mr. Campbell recently appointed mathematical master will soon bring up his department to a higher plane. The tone of the school is very good. The Institute costs the town very little and the Board would do well to pay good salaries in order to get and retain good men."

At the close of the Norwood High School for the summer vacation the pupils presented J. Davidson, M. A., the Head Master, with a gold-headed ebony cane, and the Assistant Master, Mr. G. W. Jackson, with a pair of gold spectacles. The presents were each accompanied by an address, to which a suitable reply was made. The evening was then spent pleasantly, the entertainment consisting of a magic lantern exhibition, by the pupils, readings, recitations, music, and a plentiful supply of strawberries.

The London Board of Education have ordered 1000 New Testaments for the use of the teachers and pupils in the Central and the Intermediate Schools. They will cost about $200. Dr. Campbell thought that if the pupils would "read, mark, learn and inwardly digest," and live according to the teaching of the Testament the money would be well expended.

Mr. James Ferguson, who has been Principal of the Wingham Public Schools for the past ten years, has resigned his position. We have not learned what he intends to do, but hope that he does not intend to leave the profession of which he has been an active and distinguished member.

We regret to learn that Miss Alice Higgins has been compelled to resign her position as teacher in the Brussel's Public School on account of failing health.

The sessions of the Normal Schools are to be changed back to the old dates, so as to make the examinations fall in December and June, instead of February and June. This will make the sessions fit in with the school terms and save the awkward jog caused by having one examination in February. The next session will begin about August 15th, we understand.

The half-time system has been tried in the Seaforth Public School during the past half year, and has been found to work very satisfactorily. We commend the plan as the best practical relief from "Trustees Cram."

We are pleased to learn that D. J. McKinnon, the able an energetic Inspector of the County of Peel, has been appointed Inspector for the City of St. Catharines. No better appointment could have been made.

At the midsummer closing examination in the Preston Public School, Mr. Wm. Stahlschmidt was made the recipient of a number of valuable and handsome presents, on the occasion of his retirement from the honorable and responsible position of the Principal of Preston Public School. The presents, consisting of elegant silver and crystal fruit and berry dishes, and silver cake basket, were presented by his pupils and ex-pupils as a slight expression of their high appreciation of the very valuable and efficient services he has rendered in promoting their social and intellectual welfare during the past fifteen years, that he has so successfully filled the position he now resigns. The address, full of grateful compliments and kind wishes, was read by Miss Lizzie Clare on behalf of the pupils, to which Mr. Stahlschmidt replied in very appropriate and affecting terms. The School Board also presented Mr. Stahlschmidt with a beautiful and costly silver water-service, consisting of 5 pieces with suitable inscriptions on each, accompanied by a very appreciative address, which was read by Mr. Otto Klotz, Secretary of the Board. Mr. Stahlschmidt has fitted up his new factory with the latest improved machinery, and in future will devote his attention specially to the manufacture of his celebrated school furniture. Mr. S. Mayer, his successor, comes with high recommendations as a very efficient teacher, and no doubt will maintain the well-known reputation of the school as one of the best in the province.

An action has been entered in the High Court of Justice by Wm. Barrett, Esq., against Mr. Telford, Head Master of the Walkerton Public School, to test the latter's right to punish a boy for fighting on his way to school. The legality of the following Regulations is called in question: "Pupils shall be responsible to the master for any misconduct on the School premises or in going to or returning from School, except when accompanied by their parent or guardian or some person appointed by them or in their behalf."—Regulation of the Education Department.

"Pupils on their way to and from School are expected to conduct themselves in a proper and orderly manner, and any improper conduct being reported to the teacher shall render the offender liable to punishment according to the nature of the offence."—Regulation of the Walkerton School Board.

As the question is of interest not only to the teaching profession but to every parent sending children to school, we intend to keep our readers posted on the progress of the case.—*Walkerton Exchange.*

Thomas Mulvey, B. A., gold medallist, has been appointed to a fellowship in Physics in University College.

PROF. G. P. YOUNG.—In person Dr. Young is of medium height and of a somewhat stout figure. His most noticeable features are his small, deep-set and penetrating blue eyes, and his broad, full open forehead. The expression of his face is pleasant, but earnest and sincere. He is somewhat bald, but the heavy fringe of silky white hair which adorns his head and his fine flowing beard give him a strikingly venerable appearance.

In his professional habits Dr. Young is unusually regular. He is the first professor to reach the college in the morning, and he never keeps a class waiting a minute for him. He closes his lectures with the same promptness. When the college bell rings he stops short on the moment, even if he be in the middle of a sentence. He usually has his spectacle case or a bunch of keys in his hand when lecturing, and whenever he is explaining a question of unusual difficulty he seizes the spectacle case with a firmer grasp and closes his eyes; the degree of tightness to which they are closed indicating

approximately the degree of difficulty the venerable doctor experiences in elucidating the question under consideration.

Dr. Young is a man of strongly-marked character. In general he is very quiet and retiring in his disposition, but when occasion requires it he gives forth his views with no uncertain sound. As an instance, I refer to the fact that in strong and unmeasured language he opposed President Wilson's recent unjust attempt to exclude young women from University college; and there is no doubt that Dr. Young's quoted opinion had very much weight in the parliamentary discussion on this subject. He is in favor of liberality, advancement and freedom of thought in the fullest sense. He often tells his students that he does not wish them to accept anything on his authority, or on that of any other person. Says he: "I have failed in my purpose if I have not taught you that in your search for truth, reason and not authority must always be your guide if you wish to make any real progress."

Dr. Young is a scholar of more than ordinary ability. Not only is he probably the best metaphysician in America, but he has also a profound knowledge of the higher mathematics. He is a good Greek and Latin scholar, and is quite at home in Hebrew and German. In short, in general scholarship he is without an equal in Canada.

But it is the abilities he displays as a professor that have given Dr. Young the widest distinction. Here we must call attention to a fact too generally ignored, viz., that mere scholarship is not sufficient evidence of fitness for the position of teacher or professor. The essential characteristics of the true teacher are the ability to awaken the interest of the learner in his subject, and the tact to assist him at every point where assistance would be of advantage to him. In the main it is not so much instruction as education that the college student requires of his professor. There is an important difference. Instruction consists in imparting facts; education in drawing out and developing faculties. Now the student can get his facts from his text-books or the college library, but for the development of his faculties he requires a living professor.

Professor Young is the most enthusiastic, the most successful, and the most popular teacher in the college. Although his subject is naturally the driest and most abstruse in the whole list of studies, yet such is the interest with which the professor invests it that the number of students who make mental and moral science a special study here is equal to those in all the other special departments together, namely, classics, mathematics, physics, modern languages and natural science. No coercion is necessary to secure attendance at Dr. Young's lectures. His lecture room is always crowded. No one goes to sleep in his class, or leaves the room with the very unsatisfactory feeling of precious time wasted. All the graduates in this department are conscious of a life-long debt to Dr. Young, and his retirement would be a matter of profound regret to all who know him.—*Correspondence, Markham Economist.*

Dr. McLellan's Lecture.—In connection with the Teacher's Association the Inspector of High Schools, Dr. McLellan, delivered a lecture in the Music Hall on Thursday evening last to a very large and intelligent audience on "Canada and Education," and it is not too much to say that those who arranged for the delivery of the lecture placed all who heard it under a lasting obligation. The lecture was one of a class that must be heard to be appreciated, as the manner of its delivery was as much a feature as its matter, and thus made it entirely unreportable. Notwithstanding the unfavorable state of the weather, the seating capacity of the hall was exhausted.

The Mayor, in opening the proceedings, congratulated the promoters of the meeting on the size and character of the audience.

Dr. McLellan on rising was received with such a hearty welcome as proved that either the man or his abilities, or perhaps both, were well known to quite a large number of those present. The Dr. expressed his pleasure with the audience, and gave utterance to the opinion that in no other town in Ontario had he been honored with such an audience; at the same time he wished it to be understood that he did not consider the compliment was paid to himself personally, but rather he took it as the evidence of the growing feeling in favor of education that was at present so manifest throughout the world, but especially in Britain and her colonies. He referred to Macaulay's gloomy view of Great Britain's future, which he declined to endorse, and went on to contend that because nations had in the past risen to greatness, become historic and faded away into the darkness of the past, was not a reason for believing that all nations would follow the same path. He eloquently predicted a greater and more beneficial future for the British Empire, because a Supreme Being guided her destiny, and her watchwords were "Liberty, Intelligence and Christianity." The lecturer then went on to show the reason for his belief that a cultured intelligence is the best safeguard of national liberty and the basis of a nation's progress. In this connection he referred to the French Revolution as having been the child of ignorance, and therefore a failure. Education was also essential to human progress in industrial arts, and he defined human progress to be the triumph of intelligence and liberty over the blind forces of nature. The speaker pictured Prussia after the Napoleonic war, and her determined effort to win back her position by the education of the people, and how she had succeeded let her march to Paris and the solidity of the German Empire prove. Germany, again, had reacted upon Britain, and the great Exposition of 1851 astonished the manufacturers of England by showing them that in all the industrial arts requiring skill and culture in design and execution the continent of Europe could beat them, and this so aroused John Bull that he began to move in the same direction. England and Scotland were passed in review, and a very graceful tribute was paid to the Irishman's natural genius and love of education. The audience was then informed what a system of national education should include—both primary and higher education; the equality of opportunity was dwelt upon, and the assertion made that where "the equality of opportunity," was afforded the humbler classes had contributed the larger proportion of the leaders of men, and brought forward the names of Dr. Ryerson and Prof. Huxley in proof. The objections to education were next dealt with, and amongst others, that education would diminish the hewers of wood and drawers of water, that education fosters crime, that education tends to spoil a man, and that education was not sufficiently practical. These various objections were taken up by the lecturer and subjected to the crucible of his logic, sarcasm and eloquence, and it is needless to say they were shown to be utterly indefensible and baseless. As to the last objection, U. S. authorities on educational matters were brought forward to bear testimony to the practical character of education in Canada, and that in this respect we were in advance of them. The methods of imparting knowledge were next dealt with, and the Model Schools shown to be doing good work in that direction. The methods of to-day were contrasted with the methods of the past, as shown by a very humorous and touching relation of his own school-boy days. The law of love was energetically insisted on, and teachers were reminded that a stab from a sarcastic tongue may inflict more real suffering on a sensitive nature than a sound thrashing with a rod; and it was pointed out how utterly absurd and useless it was to expect a child's intelligence to have full play whilst the possessor was trembling with fear. The lecture was concluded by the eloquent rendition of "The Dignity of Labor," which was listened to with rapt attention, and when the speaker at the close resumed his seat it was amidst the hearty and long continued applause of his hearers. —*Almonte Gazette.*

NOVA SCOTIA.

The anniversary exercises of Acadia College and its connected schools began on Wednesday, June 4th, with the Public Exhibition of the Collegiate (male) Academy. A number of very creditable essays were read, and appropriate addresses delivered by Principal Calkin (of the Provincial Normal School), and other gentlemen. It was announced that eighteen young gentlemen had passed the matriculation examination of Acadia College. On the evening of the same day, Acadia Seminary (for females) held its closing exercises. An excellent programme consisting of essays suitably interspersed with music was admirably carried out. Four young ladies were reported as having completed the prescribed course of study and entitled to the honors of graduation. The closing exercises of the college were held on Thursday in presence of a large and brilliant audience. The orations of the graduating class were delivered in the following order:—

The Genesis of Scepticism in Thought, by Enoch H. Sweet, Newport, N. S. Education a Natural Process Directed by Human Art, by H. Bert Ellis, Fredericton, N.B. Vocal Music, "The Lost Chord," by Miss Prudie Hartt. The Supremacy of Law in the British Constitution, by Benjamin A. Lockhart, Lockhartville, N.S.—Excused. The Harmony between the Artist and his Work, by Miss Clara B. Marshall, Lawrencetown, N. S. A Piano Duet. The Classical and Modern Theatre, by Frank R. Haley, St. John, N.B. The Origin and Permanence of Civil, Social and Religious Laws, by Frank M. Kelly, Collina, N.B.

The degree of D.D. was conferred upon Rev. D. M. Welton, A.

M., Ph. D. (of Leipsic), and now Professor in McMaster Hall, Toronto.

Among the impressive incidents of the anniversary week was the unveiling of a tablet erected in the college library to the memory of the late Professor Hartt, by his classmates (1860.) After appropriate remarks by Dr. Rand, Dr. S. Alward, of St. John, N.B., read an address on the life and labors of the distinguished deceased. Prof Hartt had taken part in four Brazilian exploring expeditions previous to his appointment by the Emperor Don Pedro II., as chief of the Geological survey of the whole Empire, at a salary of $10,000 a year. During his scientific career he conducted himself as a pupil of the immortal Agassiz, and his death at an early age deprived science of one of its brightest lights.

The Alumni Society at its annual meeting elected the following officiary :—President, Judge Johnstone ; Vice-President, Rev. D. G. Macdonald, Sackville, N.B.; Secretary-Treasurer, Frank Andrews, B.A.; Board of Directors, W. L. Barss, B.A. ; E. D. King, M.A.; J. W. Manning, B.A.; Rev. E. J. Grant ; Prof. Jones, M. A.; B. H. Eaton, M.A.; and J. W. Longley, M.A.; Auditor, A. J. Denton, M.A.

The Halifax Board of School Commissioners have advertised for a teacher of Modern Languages and Industrial Drawing in the high school, offering a salary of $1,000 per annum. Among other steps recently taken by the Board may be mentioned the abandonment *in toto* of the custom of presenting prizes to the pupils out of the funds of the Board, and provision for regular meetings of the teachers under the direction of the Supervisor.

Mr. A. J. McEachern, of St. Francis Xavier Academy, has accepted a position on the teacher's staff of St. Patrick's school, Halifax. Mr. McEachern will be a valuable addition to the city roll of teachers. The Antigonish *Casket* in referring to his learning, says, that town pays a high tribute to his skill as a teacher and his character as a man. For several years Mr. McEachern has been one of the Secretaries of the Provincial Educational Association.

Under the somewhat lengthy title "*Progress of Education in Nova Scotia During Fifty Years, and Lights and Shadows in the Life of an old Teacher,*" Mr. J. Willoughby has made an interesting contribution to educational and biographical literature. The author of this modest volume was a member of the first class which was graduated from the Provincial Normal School in 1856. His career as a teacher began, however, as far back as 1841, and as it has continued unto the present day, it affords abundant material for interesting and instructive reminiscences. Mr. Willoughby incidentally treats of the vexed question of religious instruction in schools in a most common sense fashion. Much important historical information is embedded in the biography.

Mr. F. A. Rand has resigned his position as teacher of the second department of the Morris St. School, Halifax.

PRINCE EDWARD ISLAND.

The closing of the city schools for summer vacation was performed this year in a manner which, not only elicited the warm approbation of the trustees and a large number of visitors, but also testified to the excellent progress made during the term. The teachers were highly complimented on the present state of efficiency in every department, and also on the splendid order and discipline apparent in every school. The Governor-General gives a medal in each of the three schools for general proficiency, the School Trustee Board awarded certificates, and numerous friends sent a large assortment of valuable books and other prizes for the best answers in the various branches of instruction, and for good conduct and punctuality. The singing, recitations and exercises were most creditable. In the absence of the Chairman of the Board, the distribution of prizes was made by Archibald Kennedy, Esq.

The closing exercises of the pupils attending the school of the Convent, of the Congregation de Notre Dame, Charlottetown, were of a most pleasing and appreciative nature. Crowns, gold medals, and a large variety of other prizes were distributed by the Bishop of Prince Edward Island, assisted by Rev. Father Carroll, and at intervals between the distribution to the several grades and classes, music, both vocal and instrumental was afforded. Five pianos, an organ and a harp formed the orchestra. The pianos, each played by two young ladies, were in such perfect accord and the fingering so exquisitely true that the effect was as if only one instrument was being played on. Some of the choicest pieces of modern music were rendered on the seven instruments, with a taste and precision that evidenced the careful and thorough instruction imparted in the Convent. The large audience was more than satisfied—and was loud in praise of what they had heard. The solos given by Miss Palmer, Mrs. Byrne and Miss E. Parmer were much appreciated, and Prof. Caven's song, "The Village Blacksmith," was warmly applauded. The Orchestral Glee Club gave their talented aid in making the concert a most enjoyable treat. Previously to its conclusion, Miss Ellie Hickey, one of the graduates, delivered a neatly-worded address of thanks to the Bishop, and in response His Lordship spoke in the highest terms of praise of the progress made during the term, and his approbation of the condition of the school. His Honor, Chief Justice Palmer and Judge Reddin both testified to the great satisfaction the exhibition had afforded. The examination papers were valued by Prof. J. Caven, of Prince of Wales College, and it is worthy of record, that in the graduating course three young ladies, Misses Hickey, Coonan and Reddin obtained one hundred per cent.

NEW BRUNSWICK.

SHEDIAC, July 10.

The Teachers Institute met at two o'clock. After roll call Mr. J. G. A. Belyea, A. B, read a paper on "Our Profession." The paper pointed out the necessity of raising the profession of teaching by increasing the efficiency of the teachers. This was to be done by studying the pupil, by studying professional literature and by devotion to the profession. The paper was generally endorsed and considered an able exposition of the situation.

An interesting discussion followed and many profitable suggestions were made.

A lesson was given to a class from the Grammar School by John Brittain on "Plant Life."

Mr. Crocket, A M. being present, stated that some changes had been made in text books at last Tuesday's meeting of the Board. The text books on Geometry, Geography and Canadian History were struck off the list and others adopted, viz : Campbell's Geography, Archer's smaller Canadian History, Hamblin & Smith's Euclid.

Mr. John Britain forcibly stated his objections to the shortening of the holidays.

Mr. J. G. A. Belyea pointed out that the schools would be but partly attended and pupils have no interest in the studies, and asked Mr. Crocket for the reason for the change.

Mr. Jonah followed in a vigorous attack upon the Legislature for lowering the Government allowance and shortening the holidays. His remarks were vigorously applauded and heartily endorsed by the teachers.

Mr. Crocket, in reply, said that the salaries as lowered would be higher than in Nova Scotia, and the holidays as shortened were as long as in Ontario or Nova Scotia ; that the Government did not willingly take off 10 per cent from the Government allowance, but were obliged to do so.

In the evening Mr. E. J. Smith, as chairman, called the public meeting to order, and introduced Mr. Wm. Crocket, A M, as the lecturer.

Mr. Crocket said he would not give any fine spun theories of education but some plain statements respecting the course of education suited to our country. He proceeded to say : The public school system ought to prepare pupils for the duties of good citizenship. The practical question is, are the pupils being prepared for the duties of life. Provision has been made for this end. If the subjects are not fitted to reach the end the fault is with the powers that be. Wrong methods are the fault of the teacher. Some hold that the 3 R's are sufficient, others more ; but the subjects to be taught are not of so much importance as the methods by which the work is done. Let us see what a course of 3 R's may accomplish. Reading may be made educative from first to last. The pupil gains from his reading new power, new ideas. To catch an idea and express it in his own words will do more for correct expression than all the rules of composition. To write a plain legible hand should be expected of all. I do not think the present system of copy books is suited to produce a good legible hand, the letters are too small and complicated by useless complications. It is hoped that the Board of Education will prescribe a better series of books. In Arithmetic, the inductive method by which the pupil is lead to find out the principles for himself, our schools have in this respect been fairly successful. But some complaints are made that not enough accuracy is possessed by the pupils. This can be accounted for by lack of drill after the rules have been acquired. The practical work of the pupil can be extended to measuring the playground, &c. These subjects, therefore, contain the substance of what the pupils want to know in life. Too much has been imposed upon the schools and too much has been attempted and but little done. For the average country teacher the course of instruction is unsuitable. The essentials first, the non essentials afterwards, should be the rule. Geometry and arithmetic are eminently fitted to cultivate the reasoning powers, and drawing the observing powers. Any subject may be made educative if the right methods are employed. We cannot go so far as to teach trade as is attempted in the United States, but industrial drawing, etc, is fundamental to many industrial pursuits and is therefore useful.

Drawing will be useful to the farmer in drawing plans for his buildings, etc, much more for artizans. Wormel's Geometry is not suited for our schools. Wormel's conception is good, but his carrying out is bad. So we shall have to throw it aside and go back to Euclid. Color is another subject of importance. Investigation into railroad accidents shows that they are due, in many cases, to color blindness. Four out of every hundred males are color blind. Four out of every thousand girls are color blind. This is due to the greater familiarity with dress goods by girls. Let the boys be instructed and this will prevent such serious accidents.

One subject more, the subject of domestic economy. It is more important for our girls to know something of the management of the household than the dry details of grammar. The girls should know how to bake bread, sew, knit, etc. The necessity for such knowledge is made obligatory in some countries now. Domestic economy, embracing sewing and knitting, is prescribed as part of the work at the Normal School.

We have found that we have attempted too much heretofore and shall have to steer for safer anchorage—our high schools and academies must be maintained.

A vote of thanks, moved by D. L. Harper, Esq. seconded by James Friar, Esq. was passed.

July 11.

FORENOON SESSION.

After roll call J. G. A. Belyea, A, M, of Shediac, gave an interesting and instructive lesson on the mechanical properties of the atmosphere. By various experiments the pupils were led to see that the air has weight and that by removing the pressure from a given portion of water that portion would rise. The mechanical arrangement by which this could be accomplished was determined by various experiments, and the principles upon which a pump is constructed were arrived at.

The lesson having been brought to a close a discussion, as to the best means of disposing of the funds on hand, took place. After the expression of a considerable diversity of opinion, it was resolved to leave the money in the hands of the Secretary Treasurer for another year.

AFTERNOON SESSION.

After roll call, an animated discussion took place which resulted in a resolution condemning several of the recent changes made by the Legislature and Board of Education in the School Law.

Ths Institute adjourned to meet at Shediac next summer.

All the teachers appear satisfied with Shediac as a place of meeting.

GENERAL.

A happy choice was that made last week by the Directors of the National School of Elocution and Oratory in Philadelphia, when they elected Dr. Edward Brooks to be President of the Faculty of that institution, to succeed the late Professor J. W. Shoemaker, who founded the school eleven years ago. Dr. Brooks was for many years president of the Pennsylvania State Normal School, at Millersville, and has a National reputation as the author of numerous valuable text-books. He will bring to his new sphere of duty the experience, influence and popularity of nearly a third of a century of successful labor in the capacities of teacher, organizers writer and lecturer, and he will find there not only congenial task, to perform, b ut also ample opportunity to employ the best thoughts and energies of his life in so doing. Both the school and its new head are to be heartliy congratulated.—*New York Daily Tribune.*

CRITICISMS FROM CANADA.—In 1881 the Minister of Education of Ontario, Canada, appointed Dr. McLellan, the Inspector of High Schools, to visit the United States and compare the schools and report. He has done so, and his report is well worth reading. What do others think of us? How do others see us? His notes respecting our normal schools show him to be a man of independent and just judgment.

As to the Albany Normal School, he tells us no lectures nor lessons on methods, etc., are given. The professional training is given by the professors; that is, the methods they employ are models for the teachers.

This visitor was apparently astonished that a normal school could occupy this position. Dr. Alden is one of the noblest of men, all will agree; he misconceived the function of a normal school. Those professors should have taught as they did, if the pupils were not preparing to be teachers. Canada won't take Albany for a model.

Of the Normal School at Worcester, Mass., he says that Principal Russell believes the function of a normal school is to give professionol training exclusively, or at all events, chiefly. He teaches educational methods theoretically and practically; besides there is a special teacher of methods. He was pleased with this normal school. He speaks in the same tone of the school under the charge of Miss Hyde, at Framingham, Mass. Of the Bridgewater Normal School, he says the object is "to make the student an educator—to give him a definite idea of the true objects, the principles and methods of education, a thorough knowledge of the subjects he will need to teach, with such a degree of skill in the application of these principles and this knowledge as will enable him to organize and control his own school and to educate his pupils."

Evidently pleased with the record of the Boston Normal School, he says: "It is the only school I have visited where teaching power is almost exclusively devoted to the professional training of teachers."

The New Britain (Conn.) he dismisses with brief remark.

The New York City Normal College gets little attention. He says: "It is no more than a high school with a training school attached; the professional work seems to be altogether a secondary thing, the principal object being to carry the student through a fair literary career."

Publishers' Department.

The following advertisement appeared in British Columbia:—

His Honor the Lieutenant Governor in Council has been pleased to direct that the present series of Readers in use in the Public Schools of this province be discarded, and that **"Gage's Canadian Readers"** be authorized in its stead, under the following regulation:—

1st. That the new series shall be introduced in all schools organized after this date.

2nd. That the Teacher of each School, having first obtained the written approval of his Trustees, shall gradually introduce the new series as opportunities occur.

3rd. That after 30th June 1885, the new series shall alone be used, and the old series shall cease to be authorized.

By Command. S. D. Pope.
Superintendent of Education.

Education Office, Victoria, B. C. 16th June 1884.

The worth of Hamblin Smith's Mathematical works is shown by the fact that they have been adopted in every Province of the Dominion of Canada, and are now recognized as the standard Mathemical works. Recently in the Province of New Brunswick the authorities have determined to introduce as per following letter.

W. J. Gage & Co. Publishers. Toronto.

DEAR SIRS.,—I have the honor to inform you that the Board of Education has to-day prescribed Hamblin Smith's Geometry for use in the Schools of New Brunswick, to take effect on 1st November next. Yours truly,

Wm. Crocket.
Chief Supt. of Education.

Readings and Recitations.

THE OLD READING CLASS.

WILL CARLETON.

I cannot tell you, Genevieve, how oft it comes to me—
That rather young old reading class in District Number Three,
That row of elocutionists who stood so straight in line,
And charged at standard literature with amiable design.
We did not spare the energy in which our words were clad;
We gave the meaning of the text by all the light we had;
But still, I fear, the ones who wrote the lines we read so free
Would scarce have recognized their work In District Number Three.

Outside the snow was smooth and clean—the winter's thick-laid dust;
The storm it made the windows speak at every sudden gust;
Bright sleigh-bells threw us pleasant words when travelers would pass;
The maple-trees along the road stood shivering in their class;
Beyond, the white-browed cottages were nestling cold and dumb,
And far away the mighty world seemed beckoning us to come—
The wondrous world, of which we conned what had been and might be,
In that old-fashioned reading-class of District Number Three.

We took a hand at History—its altars, spires and flames—
And uniformly mispronounced the most important names ;
We wandered through Biography, and gave our fancy play,
And with some subjects fell in love—"good only for one day ;"
In Romance and Philosophy we settled many a point,
And made what poems we assailed to creak at every joint ;
And many authors that we love, you with me will agree,
Were first time introduced to us in District Number Three.

You recollect Susanna Smith, the teacher's sore distress,
Who never stopped at any pause—a sort of day express ?
And timid young Sylvester Jones, of inconsistent sight,
Who stumbled on the easy words, and read the hard ones right ?
And Jenny Green, whose doleful voice was always clothed in black ?
And Samuel Hicks, whose tones induced the plastering all to crack ?
And Andrew Tubbs, whose various mouths were quite a show to see ?
Alas ! we cannot find them now in District Number Three.

And Jasper Jenckes, whose tears would flow at each pathetic word,
(He's in the prize-fight business now, and hits them hard, I've heard ;)
And Benny Bayne, whose every tone he murmured as in fair,
(His tongue is not so timid now ; he is an auctioneer ;)
And Lanty Wood, whose voice was just endeavoring hard to change,
And leaped from hoarse to fiercely shrill with most surprising range ;
Also his sister, Mary Jane, so full of prudish glee,
Alas ! they're both in higher schools than District Number Three.

So back these various voices come, though long the years have grown,
And sound uncommonly distinct through memory's telephone ;
And some are full of melody, and bring a sense of cheer,
And some can smite the rock of time, and summon forth a tear ;
But one sweet voice comes back to me, whenever sad I grieve,
And sings a song, and that is yours, O, peerless Geneveive !
It brightens up the olden times, and throws a smile at me—
A silver star amid the clouds of District Number Three.—*Harper.*

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

County of Wellington Teachers' Institute.—The County of Wellington Teachers' Institute, held in Fergus on the 28th, 29th, and 30th May, 1884, was a great success, being well attended by teachers, trustees and others, and ably conducted throughout. It was probably one of the best county conventions ever held in Ontario. The committee were very fortunate in securing the services of E. V. DeGraff, Esq., M.A., a leading educationist from Washington, D. C., U. S. A. The teachers of Wellington had a good opportunity of comparing their methods of teaching with those of the leading teachers of the United States. As Prof. DeGraff said, his theory was not new ; his work was practical. He wisely confined himself to subjects taught in the common school. Judging from the way the teachers present used their note-books, it should be anything but a failure, if the note-books are studied when they reach home. Mr. Alex. Petrie, of Elora, President of the South Wellington Association, gave a suitable address of welcome to those present. He then introduced Prof. De Graff, who, in course of his remarks said, the great object of teaching was to get the best methods of developing true manhood and womanhood. He first took up the subject of "Reading," and discussed the different methods ; he advocated the use of all, excepting the A, B, C, method, which he condemned as irrational and unphilosophical. He also gave an interesting lesson on "Phonics." The afternoon's session opened with the reading of two addresses to the Hon. Geo. W. Ross, Minister of Education, one by the teachers, and one by the trustees of Wellington. Mr. Ross made a suitable reply : he said he was pleased with the work the Convention was doing. He took up the subjects of High and Public School Grants, Third Class Certificates, and the Superannuation Fund. He thought the grants should be divided according to (a) average attendance, (b) qualification of the teacher, (c) school accommodation, etc. The trustees and teachers seemed to agree with him ; but the high school teachers and trustees wanted, in addition, the grant of $750 to Collegiate Institutes withdrawn, and divided among the high schools, as it tended toward centralization of higher education, thus weakening small schools already weak. Mr. Ross seemed to be in favor of having the Third Class Examinations conducted by a County Board, as formerly. The inspectors and older teachers are not in favor of it. All agreed that no permits should be granted except in unorganized districts, or in townships like the North of Hastings ; and that after their certificates expired, they should go up for examination every year. The Superannuation Fund was warmly discussed. Mr. Ross seemed to be in favor of abolishing the Fund, on condition that the vested rights of all should be respected. The younger teachers wish it abolished ; the older teachers wish to continue to pay into the Fund, as they were forced into it in the first place. Inspector Craig thought that if the Government wished to economize, they might begin with the civil service and not with the teachers. A petition was signed on Friday, requesting the Minister to allow all those who wished to pay into the Fund to do so ; thus leaving it optional. In the evening Mr. Ross delivered a practical educational address. *Thursday.*—On Thursday morning, Mr. Bright, of Drayton, President of the North Wellington Association, after a brief address, called on Prof. De Graff, who took up the subject "How to Teach Reading to Beginners." He would show an object to the children, and ask questions about it ; he would draw the object, or show a picture of it. Then he would write the word on the board, taking great care to write well. He would not use a book. In reply to a question, he said he was in favor of having the primers printed in script. He would teach writing from the first, because it was economical ; once learned it was learned forever. He said, when you have taught a pupil to read well, you have taught him everything except arithmetic. He would make every lesson a language lesson. Principal Grant, of Queen's University, Kingston, followed with a short, but excellent address. He spoke of the excellency of the Scottish school system, instituted by John Knox ; and the necessity of enthusiasm in a teacher. Experience seemed to count for nothing in the teaching profession. Teachers should be faithful to duty, no matter who were unfaithful to theirs. In the afternoon Mrs. Hunt, of Boston, Mass., gave an able address on "Compulsory Teaching of Temperance in Schools." She showed the effects of alcohol on the human system from the scientific standpoint ; she spoke of the possibilities of the Anglo-Saxon race were it not for strong drink. The greed for gold is the mainspring of the liquor traffic. She believes in educating popular opinion, and then suppressing the evil by legislation. It was carried unanimously that the Convention should urge upon the Education Department the necessity of having scientific temperance taught in the schools. Col. Clark, M.P.P., read an interesting paper on topics relating to school work and the school. In the evening Principal Grant lectured to a large audience on "Across the Rockies on foot." Friday.—On Friday morning at 8 o'clock, separate meetings of both Associations were held for the election of officers, and the transaction of necessary business. Prof. De Graff took up the subject of "Spelling." Spelling is a question of form, not sound. The forced attempt to reproduce that which is vague or indistinct is injurious ; all spelling should lead up to composition. He next took up the subject of "Language." It cannot be learned by rules, parsing, analysis, etc. It is learned from (*a*) parents, (*b*) teachers, (*c*) associates, (*d*) books. "Things that have to be done should be learned by doing them."—Comenius. For the last 50 years, he said, we have been teaching the science of the art, instead of the art which is practical. Mr. Jos. Carson, I.P.S., of West Middlesex, treated the subjects, (*a*) "How to Teach Arithmetic to Beginners." (*b*) "How to Assign Lessons in Literature," in an able manner. Prof. De Graff next took up the subject of "School Management." He said the use of corporal punishment showed the weakness of the teacher. In the evening the Professor lectured on "Elements of Success, or Bound to Win," to a large audience. He strongly urged young men to stop on the farm, or be good mechanics, as thousands of young men in the professions, etc., cannot get anything to do, at any salary. At the close of the lecture, thirty young ladies from Guelph Central School, in uniform, gave a calisthenic exhibition, under Adjut. Clarke. It consisted of club-swinging, marching, etc. ; it was admirably, and highly appreciated by the audience.

Carleton.—The semi-annual session of the County of Carleton Teachers' Association was held in school-house No. 4, Bell's Corner's, on the 22nd and 23rd—the president, Mr. Smirle, I. P. S., presiding. The president, in his address referred to important subjects which would present themselves for careful considera ion, such as superannuation fund, etc. The minute relative to text-books was freely discussed, and the questions submitted by the committee in Toronto regarding Teachers' Superannuation Fund were carefully replied to. Moved by James Argue, seconded by H. McKercher, and carried, that the Secretary-Treasurer be a paid officer. Moved by James McElroy, seconded by D. D. Keenan, that the president be appointed a delegate to the Provincial Association.—Carried unanimously. The Midsummer holidays were freely debated upon by Messrs. H. McKercher, Jas. McElroy, A. Smirle, and H. S. Moffatt. It was moved by Mr. Wallace, seconded by Mr. McKercher, and carried, that in the opinion of this Association it is regretted that an option should be allowed school boards of shortening said vacation. The payment of teachers' salaries was discussed at some length, when it was moved by Mr. Hunter, seconded by Mr. Argue, and carried, that this Association approve of the salaries being paid quarterly. The president introduced Mr. Munroe, (Principal of Central School East Ottawa,) and Mr. McMillan, (Principal of Collegiate Institute), who followed respectively with "Teachers Extra Duties," and "Teacher before his Class." It is needless to remark both gentlemen received much applause throughout ; their subjects being handled in a masterly manner. The president, and Messrs. Smith, Mc-

Elroy, Keenan and Wallace, debated lengthly but chiefly in harmony upon both papers. Thanks were tendered both gentlemen for kindness and benefit from their presence. *Second day's proceedings.*—Messrs. McElroy, Moffatt, Pratt, Keenan, and Foster were appointed to arrange programme for the next session. The former committee in charge of the correct were re-appointed, having performed the work so satisfactorily. It was moved by Mr Keenan, seconded by Mr. McKercher, that next session be held on the 16 and 17th of October.—Carried. Mr. L. Smith's paper on mental arithmetic was then read and elicited much eulogy owing to accurateness of preparation. Criticisms were made upon it by Messrs. Keenan, Hunter, McElroy, Pratt, Moffatt and McKercher. Reverend Mr. Patten, of Bell's Corners, and Mr. Andrews, an old pedagogue of Carleton, were honored with membership. Mr. James McElroy's paper on "Loyalty to Queen and Submission to the Laws" followed. This subject being different from those usually given, proved very interesting. Criticisms were elicited from Messrs. Keenan, Smith and Hunter. Mr. J. H. Moffatt's paper on literature proved very satisfactory to all, and received few criticisms. The study of Latin and Greek roots was discussed ably, and apparently met with the approval of all. Votes of thanks were tendered trustees for the use of the building. A very interesting and successful concert was held in the old Town Hall by the association on Thursday evening. Mr. Smirle presided with his usual ability. Among those who contributed largely to the programme were Miss Wallace, of Fallowfield; Miss Bain, N. Gower; Miss Dawson and Mr. J. Moodie, Bell's Corners; Mr. Hendricks, Ottawa; and Mr. C. O. Carson, Gloucester.

PRESCOTT.—The half-yearly meeting of the Prescott Teachers' Association began here on May 30th in the County Model School. Mr. Summerby occupied the chair. About forty-five teachers were present. Mr. Marshall, Principal of the Model School, read an excellent essay on "Thoroughness in Teaching." Mr. Summerby gave a clear explanation of the Quincy system as carried out by Colonel Parker. Mr. S. S. Burns read an essay upon the "Appearance of the Teacher in the School Room," which received the approval of all present. Dr. MacCabe lectured before the association on the subject of "Reading." He discussed the different systems in use among teachers in teaching beginners to read, showing the defects of the various methods, and calling attention to the necessity of clear articulation. By quotations from Shakespeare and Milton he explained the necessity of paying proper attention to "time" in reading. Mr. Alford addressed the meeting upon the necessity of looking out for their own interest as well as the interest of the people. On Friday evening Dr. MacCabe delivered a public lecture on the subject "What More." There was a very full house, many not been able to find seats. On Saturday morning Dr. MacCabe lectured before the association upon the teaching of grammar and composition. The lecture was very interesting and instructive. The following are the officers for the ensuing year:—President, J. A. Houston, B.A.; 1st vice-president, J. W. McCutcheon; 2nd vice-president, J. Kyle; secretary-treasurer, A. H. Watson, B.A.; librarian, D. Marshall; committee, Messrs. Simmerby, Hay, Kirkonnell, Miss Hyde, Miss Keough; auditors, Miss McIntosh, Miss Thistlewait.

HALDIMAND.—The semi-annual meeting of the Haldimand Teachers' Association was held in the town of Dunnville, on Thursday and Friday, the 29th and 30th of May. There was a very large attendance of teachers in the afternoon. The Association met as per adjournment, the President, Mr. Egbert, in the chair. The first speaker in the afternoon was Mr. C. Moses, I. P. S., who gave a very interesting account of his tour of inspection, introducing many ludicrous incidents with which he met on his journey. He stated that on the whole good work was being done, but that there was still great room for improvement. He found fault with some of the schools on the following points, and showed how to remedy the faults: 1. Attention of pupils; 2. Classification of pupils; 3. Seating of pupils; 4. Assigning lessons; 5. Dirty and untidy school rooms; 6. Untidy school grounds; 7. Teachers text-books. Mr. L. A. Kennedy, B. A., Principal of the Caledonia High School, introduced the teaching of Elementary Composition in a manner satisfactory to all present. He dealt with the subject under the following heads: 1st, Oral Composition; 2nd, Written Composition. Oral composition should be cultivated from the beginning of the pupil's school education. All that a teacher addressed to his pupils in class should influence their power of expression; as, 1. The teacher's questions; 2. His mode of dealing with answers; 3. His explanations; 4. His narrations; 5. The stories which he relates to them; 6. His private conversation with them. Written composition was dealt with under the following heads: 1st, Use of capital letters; 2nd, Punctuation; 3rd, The use of the pronouns; 4th, The giving of the substance of the reading lesson in the pupil's own words; 5th, The writing on a topic on which a conversation had previously taken place between the teacher and pupils; 6th, The reading by the teacher of a narrative for production by the pupil; 7th, The paraphrasing of extracts of poetry; 8th, The teacher giving the outlines of the subject to be filled in by pupil; 9th, Letter writing. He advocated the importance (*a*) of drawing the attention of the pupils to elegant forms of expression to be limited by them; (*b*) of learning by heart choice selections of prose and poetry; (*c*) of encouraging the pupils to read outside of school work. "Measures and Multiples" were next introduced by Mr. R. C. Cheswright, Head Master of the Model School, Caledonia. He showed in a very clear manner how these subjects, in regard to both whole numbers and fractions, could be taught intellectually instead of mechanically, the latter being too often the case. Evening Session. The enter ainment in the evening consisted of lectures, songs and recitations. Dr. Yeomans, of Mount Forest, member of the Provincial Board of Health, gave a very interesting and instructive lecture on the "Sanitary Supervision of Schools." It was an able paper, very instructive to all inquiring people, especially to teachers, trustees and leaders of public opinion. The solos by Messrs. Hamilton and Alexander elicited well deserved encores. L. A. Kennedy, B. A., brought down the house by reciting the "Red Jacket," and on being recalled he gave "The Derby" in a very able manner. Then came the treat of the evening, a lecture by Rev. Alex. Grant, B. A., on "Milten." The Rev. gentleman sketched the life of his subject from boyhood up, pointing out in a clear, lucid manner what may be accomplished by patient, earnest study. The lecture throughout was very interesting, and must leave a good and lasting impression on the minds of the large audience which was fortunately privileged to hear him. Rev. Percy W. Smith ably filled the chair. Friday—Morning Session. The meeting was called to order at 9 o'clock, the President, Mr. Egbert, in the chair. The "Entrance Examination" was discussed by J. P. Hume, B. A., Head Master Dunnville High School. He stated that the entrance examination was established at *first* as a criterion for admission to High Schools, *now* it is also a culminating point of school training of a great many pupils and it is to be feared of their education, hence the necessity of raising the standard of the entrance examination, both as to the amount prescribed for examination and proficiency required in work so prescribed. Also since the inauguration of the present system of examinations in High Schools, the examinations have yearly been made more difficult, while the entrance examination has not been made correspondingly difficult. He stated that the work proscribed for the entrance should be as follows: Arithmetic—a practical knowledge of Interest (simple and compound), Present Worth and Discount. The pupils on leaving the school ought to have a practical knowledge of these departments of arithmetic. History:—The history of our own Dominion first, then of the country from which the early pioneers of this fair continent came, dealing with that country only during the period in which they were forced from their homes and the periods elapsed since then, viz:—The Stuart and Guelph periods. Geography:—A more thorough knowledge of the railway and canal system of our Dominion, with a knowledge of the great resources of our country, our exports and imports. Composition and Grammar:—In these subjects he thought the work prescribed probably sufficient, but he considered the questions set—especially for the last examination—were of a very objectionable character. Taking another view of our system of examinations as at present established, he thought the great evil is that of cram, which exists in both the High and Public Schools. He would remedy this evil in two ways: 1st, Limit the age of entrants to twelve years; 2nd, Hold examinations yearly. A lively discussion ensued upon Mr. Hume's remarks, a number of the teachers dissenting from many of the views advanced. Afternoon Session. The questions in the "Question Drawer" were next taken up, and were answered satisfactorily by the committee. A. E. K. Greer, B. A., classical master Dunnville High School, next introduced the "Superannuation Fund" and gave many reasons why it should receive the hearty support of the teachers as well as the people of the country. Although Mr. Greer handled his subject in an able manner, yet he failed to convince the teachers of Haldimand that the fund is anything but an imposition and only derogatory to the dignity of the profession. A committee, composed of Messrs. Hamilton, Cheswright and Egbert was appointed to draw up a memorial and send it to the Hon. the Minister of Education, asking him to do away with the Superannuation Fund, and to repay to the teachers of the Province all sums of money paid into it. This committee was also instructed to interview Dr. Baxter, M. P. P., and ask his influence in wiping out of existence this gross imposition. Miss Brown, of Dunnville, next gave a practical lesson in teaching. She brought a class into the room and gave a first lesson in English Grammar, in the most approved modern way. Mr. L. H. Alexander, B. A., modern language master of the Caledonia High School, then read a valuable paper upon the "Teachers Library." 1. He showed that a *selection* of books is necessary, both because of the great number of books published and the small number which one can read; also because there are two classes of books—books of the hour and books of all time. 2. A teacher must have two main qualifications: (*a*) a thorough knowledge of what he has to teach and methods of teaching; (*b*) a knowledge of men and things beyond the pale of mere school work. 3. The latter is to be attained in two ways: (*a*) by studying human nature; (*b*) by reading. 4. The different departments of Literature were taken up—Biography, History, Philosophy & Science, Poetry & Fiction—the practical uses of each department being pointed out. At the conclusion he was requested to allow the paper to be published. The result of the

election of officers for the ensuing year was as follows : President—W. Egbert ; Vice-President—Miss Harrison ; Sec. Treas.—C. Moses ; Executive Committee—L. A. Kennedy, B. A., J. G. Carruthers, W. Egbert and Misses O'Neil, Hisler and Harrison. The Association adjourned at 3.30 p. m., to meet at the end of another six months at Hagersville.

EAST KENT.—The annual meeting of the East Kent Teachers Association held in Ridgetown, May 26th and 27th, was probably the most successful ever held in the county. The following subjects were introduced by the gentlemen named, and discussed by the Association :

History in relation to Geography, by E. B. Harrison, I. P. S. Language Lessons about the school-room, by E. Masales, H. M. P. S., Ridgetown ; Mental Culture, by G. A. Chase, M. A., H. M. H. S., Ridgetown ; The Art of Questioning in Two Lectures, by Dr. McLellan, who also took up the subject of Rational Analysis. The addresses gave evidence of careful preparation, and while being of a decidedly practical character, were pitched upon a higher plane of thought than usual.

Motions were passed to adopt Uniform Promotion Examinations throughout the county, to place a school journal in the hands of every teacher, and to request the Secretary to forward to Mrs. A. F. Butler, St. Thomas, a letter of condolence, expressing our profound regret at the death of A. F. Butler, I. P. S., Elgin. The following are the officers for next year : President, E. B. Harrison, I. P. S. ; First Vice-President, ——Johnson, Highgate ; Second Vice-President, E. C. Dalton, Ridgetown ; Secretary, R. Parks, Marpeth ; Treasurer, Miss J. Butlers ; Librarian, Miss H. O'Donohue.

On Monday evening, Dr. McLellan delivered a lecture on the Parent and Teacher in relation to the school, to an audience of over 400. The lecture, a synopsis of which has appeared in your columns, is full of interest. The Dr. writes the powers of a rarely-gifted mind, and commanding presence with that magnetic force, which forms so prominent a factor in the make-up of an orator, and which never allows interest in a subject to flag. The proceedings were enlivened by instrumental and vocal music from the pupils of Ridgetown High and Public Schools. S. B. Sinclair, Mathematical Master, Ridgetown High School, President of the Association, presided throughout in his usual happy manner.

ELLA C. DALTON,
Secretary.

[For want of space reports from South Grey and several other conventions have been held over.]

REVIEWS.

LESSONS IN CHEMISTRY, by W. H. Greene, M. D. *Philadelphia : J. B. Lippincott & Co., 1884.* This is another most attractive class-book which serves to mark the immense progress in educational appliances. It covers the ground required for first-class certificates, and also gives a short sketch of the carbon compounds. It is well illustrated with figures of apparatus, and the author has wisely refrained from introducing more than outline of chemical philosophy, giving the leading place to a clear grasp of facts.

INTELLECTUAL ARITHMETIC UPON THE INDUCTIVE METHOD, by Warren Colburn, A. M., revised and enlarged edition. *Boston, 1884 : Houghton, Mifflin & Co.* The first edition of this remarkable book appeared in 1821, and has been the basis of all succeeding mental arithmetics. It now contains 216 pages and costs 35 cents. It is useless to commend a book that has held such a high place for more than sixty years. It should lie on the desk of every public school as a part of the ordinary apparatus. The number pictures contain the key to all successful teaching in infant classes.

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THE CENTURY MAGAZINE for June contains an important educational article entitled "What is a Liberal Education," by President Eliot, of Harvard. The July number contains another by Theodore D. Woolsey on "Academical Degrees." The illustrations are as fine as ever and the contents both useful and instructive. Only $4 per annum. Century Co., New York.

THE ST. NICHOLAS, same publishers. $3 per annum. This is probably the best boy's and girl's magazine in the world. Everything about it is first-class. Every public school teacher should get it for his school. Thirty subscriptions of ten cents each would bring this delightful visitor twelve times, and every visit would be a blessing to the school.

EDUCATION.—N. E. Publishing Co., Boston. $4 per annum. This bi-monthly continues to hold the high place already attained in educational literature.

THE JOHN HOPKIN'S UNIVERSITY REGISTER supplies information of great interest to all university graduates.

REPORT OF THE BOARD OF EDUCATION FOR RHODE ISLAND.—This able document is not only replete with information but contains important discussions and practical suggestions. Such reports as these ought to find their way into all our teacher's association libraries.

EUCLID'S ELEMENTS, BOOK I, *with Notes, Questions, Exercises, &c., by Robert Potts, M. A., New Edition, corrected and improved.* This well-known standard work has been revised and improved.

A GRAVEYARD FLOWER, *by Wilhelmine von Hillem,* translated from the German by Clara Bell. New York, 1884, Wm. S. Gottsberger. A sweetly, sad story, a tryant father, a martyr daughter. One of an interesting series of translations by these publishers.

JOHNSON'S HOW TO TEACH ARITHMETIC, by G. W. Johnson, Hamilton. A lively little book by a Canadian teacher, well worth perusal for the sake of its tension and suggestiveness. Young teachers will learn something from it.

THE PRINCIPLES AND PRACTICE OF COMMON SCHOOL EDUCATION, by James Currie, A. M. *Cincinnati : Robert Clark & Co.* This is the American reprint of Currie's admirable treatise. The paper, type and binding are superior to those we are accustomed to in the English edition.

THE ELEMENTS OF LOGIC, by W. Stanley Jevons, L. L. D., recast by David J. Hill, L. L. D. *Sheldon & Co., New York and Chicago.* We wish every teacher could be persuaded to digest this masterly little book. The time will soon come when it will be placed among our professional text-books for Normal Schools. This is really a new edition to which president Hill has added a sketch of the author's life, a complete and precise analysis, copious questions for testing mastery of the text, and a very full selection of practical exercises. This book is got up in first-class style and has the advantage of being beautifully printed with display type for leading principles and smaller type for remarks and illustrations. It forms a thoroughly complete class-book with a valuable index and glossary, giving brief definitions of logical and philosophical terms and short sketches of the lives of the principal writers mentioned.

HAZEN'S COMPLETE SPELLING-BOOK : *Ginn, Heath & Co., Boston.* First 24 pages in script, 181 lessons in spelling and dictation well graded, accents marked, uncommon words avoided throughout early lessons, classified lists, &c. on the plan of GAGE'S PRACTICAL SPELLER. A good book.

Grammar and Logic in the Nineteenth Century, as seen in a Syntactical Analysis of the Eng ish Language. By J. W. F. Rogers, Inspector of Schoo's, Sydney. London : Trübner & Co. ; Melbourne, Sydney, and Adelaide : George Robertson. 1883.

This work is merely a book of criticisms. The author finds that previous writers on Grammar and Logic are all more or less wrong-headed with regard even to the fundamental parts of their respective sciences, on which, with a good deal of confidence, he proceeds to set them right. In this we do not think that success is so conspicuous as he supposes. He is, however, a man, of considerable acuteness, and, as various writers on Grammar and Logic may be named whose modes of statement are not quite so accurate and well considered as might be desired, he has succeeded in detecting various instances of inconsistency and self-contradiction, and may fairly claim the right to series of small triumphs on such points. His criticisms, however, are by

no means always just, or free from the inconsistency with which he charges others.

For example, he remarks (p. 3) that "words cannot be classed by their import, but they can by the offices they perform;" and shortly after says "there are many cases in which, without a knowledge of the meaning of the word, we cannot distinguish how it is used." Surely, if the classification of a word is determined by its use and its use is determined by its import, it is the import that determines the classification. Sometimes Mr. Rogers entirely misunderstands the passage he is criticizing. Thus he quotes from Dr. Latham:—"A word with no characteristic sign at all in a language (like English), where such signs are either wanting or scarce, may be anything or everything as a part of speech, inasmuch as its form is indifferent." On this he remarks (p. 6): "No word in English can be any or every part of speech, nor is the form of words, even as regards their classification, altogether a matter of indifferance. Sometimes in English, as frequently in Latin, the form of a word may help to show what part of speech the word belongs to." Just so; but the remark does not in the least degree touch Dr. Latham's statement. If the form of a word helps to show what part of speech the word belongs to (as in the Latin *veniat*, which Mr. Rogers cites), it is because, in addition to so much of the word as stands for the fundamental idea, there is something more, which is a characteristic sign of the part of speech. But Dr. Latham is speaking of words where there is no such sign, and of such he says rightly that, as regards their classification, their form is *indifferent*—that is, expresses no difference by which classification can be determined. He does not say that "form" is always "indifferent." A distinction which Mr. Rogers goes on to draw is really too subtle for this side of the world. Speaking of this same word *veniat*, he says:—"This word is not a verb." But its "inflection" is its "verb-form" (for the schoolboy, we are told, knows by its form that it is a verb); so that we arrive at this profound distinction, that *veniat* is not a verb because it has verb-form, but has verb-form because it is a verb; which is very much like saying that a horse is not a quadruped because it has four legs, but rather has four legs because it is a quadruped. Mr. Rogers is a wonderful hand at logical mare's-nests of this kind. It is surely obvious enough that the stem *veni* cannot be used as a verb *until it has acquired verb-form.*

As regards one duty, our author has shown some negligence. When a critic assails the views or expressions of a writer, he should take reasonable pains to ascertain that he is dealing with the matured views of the writer in question. This Mr. Rogers has not always done. Speaking of Dr. Morell and Mr. Mason, he says (p. 18):—"Nowhere does either of them tell his pupils that words should be classified according to their uses." On turning to the English Grammar of the latter of these two writers, we find among the introductory remarks (p. 10):—"Words are of different sorts according to the purpose which they serve in a sentence," and all the definitions subsequently given of the several parts of speech are based upon this principle. In fact, we have found that all Mr. Rogers's references to this author are misleading, as he quotes from a quite antiquated edition of his Grammar, and most of his criticims on it have been rendered superfluous by the modifications introduced in later editions.

But we must not delay longer before we introduce our readers to Mr. Rogers's grand achievement, the definition of the verb. After enlarging upon the theme that "several of those who are reckoned among the profoundest intellects that have enlightened the world by their researches have signally failed in defining the verb and ascertaining in what its essence consists," he announces his own discovery. "A verb is a word which, with a noun or equivalent, forms a sentence" (p. 47). "It has taken the world more than two thousand years to arrive at this definition, which any educated person may understand in two minutes" (p. 53).

We are sorry to say anything that may interfere with the serene self-satisfaction that shines forth in the above remark; but, after pondering on this definition with due reverence and attention, we are constrained to say that, if the world had waited for it two thousand years longer, the sum-total of its exact thought would not have been seriously diminished. We concede all that Mr. Rogers would claim as to "plainness" and "simplicity," only our use of the term "simplicity" would include a sense of it which Mr. Rogers had not in his mind. He had been "simple" enough to define a thing (virtually) in terms of itself. It has not occurred to him that his definition has no meaning *till we know what a sentence is.* What is it that makes "Time flies" a sentence, while "Past time" is not? No answer to this question is possible till we have defined the relation between a subject and a predicate—that is, *till we have defined a verb.* A sentence is a *compound*, consisting of two constituent elements which bear a certain relation to each other. It is absolutely impossible to define the compound except by defining its constituent elements and their relation. Until this has been done, therefore, Mr. Rogers's definition comes to nothing more than saying that the second of these two constituents is something which, put along with the first, makes the compound which consists of the two put together. And this, forsooth, is the definition for which the world has been waiting in dumb expectation for more than two thousand years!

We can hardly venture to estimate how long it will be before the world accepts some other statements of Mr. Rogers's. He tells us, for example, (p. 64) that "some of these participles (for instance, *been*) partially resemble a noun, but they are not names, and therefore are not nouns." We have not the faintest notion what he means, unless he refers to the fact that they may be used after *have*—in such combinations as "I have been," &c. Is it possible that he fancies that *been* is there the object of a transitive verb? On the next page we have a still more surprising statement. "The word *to*, known commonly as 'the sign of the infinitive,' should on no account be styled a preposition, since its use is essentially different from that of the preposition. Like *a, an*, and *the*, it is an *article*, and, being placed beside a noun to affect its meaning, is to the full as much an adjective as they are." On this it is obvious to remark that an adjective does not *affect the meaning* of a noun. It introduces an additional conception to what is already conveyed by the noun, but in the latter it makes no alteration at all. Whether we say *balls, black balls three balls*, or *the balls*, the meaning of the noun *balls* is absolutely the same. Its *application* is limited by the adjective, but that is another matter. In what sense Mr. Rogers supposes that any similar function is fulfilled by "to" simply passes our comprehension. And surely he can hardly fail to be aware that "to eat" is neither more nor less than a slightly worn-down form of the Old English "to etanne" ("I have meat to eat"="Ic haebbe mete tô etanne"), where "to" (in the ordinary phraseology of grammars) governs the infinitive noun in the dative case. Pray, at what point in the history of this phrase did the "to" transform itself from one part of speech into another? Did the mere wearing away of the dative inflection in the one word effect this surprising change in the other? That the "to" should be retained when the infinitive is used as the subject of a sentence is, of course, an unmeaning anomaly, but we shall make queer work of definitions if we base them upon anomalies.

But grammarians are not the only sinners whom Mr. Rogers strives to lead to repentance. The logicians are all mistaken, and have blundered over the simplest elements of their science. They do not understand what is meant by a *proposition* or a *predicate.* Whately, Newman, Mill, Grote, Mansel, Sir W. Hamilton, De Morgan, &c., are all wrong in stating that logical propositions consist of two terms united by a copula, and still more wrong in regarding "is," treated as a copula, as being not exactly the same in force as "is" standing as a predicate." Mr. Rogers says (p. 136):—"Of this same word "is" I would here further observe that it has but one meaning in every proposition in which it occurs, and that this meaning is expressed, so far as the meaning of one word can be expressed by another, by the word *exists*, its synonyme." This will lead us to some perplexing consequences. Take the sentence: "By the change of a note the harmony is annihilated." According to Mr. Rogers, this means that the harmony *exists annihilated!* Curious, if true? So "He is being shaved"="He exists existing shaved."

Again, referring to the contrast which Mr. Grote finds Aristotle remarking between "Homer is" and "Homer is a poet," Mr. Rogers says (p. 155):—"As for the sentences quoted by Mr. Grote, it is quite as true to say 'Homer is' as 'Homer is a poet'; for he cannot be a poet unless he is (living)." Surely, "the force of quibbling could go no further." According to this, it would be absurd to say "Shakespeare is the king of dramatists," because "Shakespeare cannot be a king of any sort unless he is (living)." Indeed, Mr. Rogers does not seem quite sure of his own position, for in p. 154 we find him "hedging," by endeavouring to show that the full, notional sense of "is" in such a sentence as "Homer is" arises from our understanding the word *living*, which is suggested by the emphasis placed on the verb. Is it really true that the full sense of the great utterance "I am" depends upon our supplying (mentally) the word *living?*

Mr. Rogers must submit to be told that the logicians, from Aristotle (whom he strenuously but unsuccessfully endeavours to exclude) downwards, are right, and that he is wrong. He more than once ignores the fact that words do not always suggest the same conception to the mind by their use. When we say, "The child will fall," we do not understand that the child is determined to fall; when we say, "He is working hard that he may finish his task before dinner," the notion of *permission* has quite evaporated from the auxiliary "may." The same sort of thing happens with "is" when it is the mere instrument of predication, or auxiliary of a passive verb. Mr. Rogers would have avoided many rash statements if he had attended more to the historical development of language in general and English in particular. With what exceeding assurance he can lay down the law at times, may be illustrated by the extraordinary statement (p. 65) that "there is no science of grammar till language becomes written." If this is not a mere childish quibble about the etymology of the word *grammar*, it is as ridiculous an assertion as we ever met with. There may be a *science of spoken language*, as there may be a science of any aggregate of related phenomena.

In closing our remarks upon this work, we regret that we cannot congratulate the author on having done much to disperse the grammatical darkness of this side of the globe.—*From the Educational Times, January 1884.*

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Table of Contents.

	PAGE.
EDITORIAL :—	
The Division of Labor in Public Schoo s	169
Dr. McLellan's Promotion	0
History for Entrance Examinat on	170
The Great Educational Meeting at Madison, Wis.	170
Dr. Tassie	171
Mr. Seath's Appointment	171
Death of Mr. Clarke	171
Notes and Comments	171
MATHEMATICAL DEPARTMENT	149
CORRESPONDENCE	149
SPECIAL ARTICLES :—	
Dr. McLennan's Lecture	177
EXAMINATION QUESTIONS :—	
Promotion Paper from the County of Lanark	178
Prince Edward Island Normal School Entrance Examination, August, 1884	180
PRACTICAL DEPARTMENT :—	
History: How to Teach it	18
MISCELLANY :—	
Marty's Various Mercies (concluded)	182
This Canada of Our	185
The Fault of the Age	185
NOTES AND NEWS :—	
Ontario	161
Prince Edward Island	163
New Brunswick	163
TEACHERS' ASSOCIATIONS	165

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CANADA SCHOOL JOURNAL HAS RECEIVED

An Honorable Mention at Paris Exhibition, 1878.
Recommended by the Minister of Education for Ontario.
Recommended by the Council of Public Instruction, Quebec.
Recommended by Chief Superintendent of Education, New Brunswick.
Recommended by Chief Superintendent of Education, Nova Scotia.
Recommended by Chief Superintendent of Education, British Columbia.
Recommended by Chief Superintendent of Education, Manitoba.
Recommended by the Chief Superintendent of Education, P. E. Island.

The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

THE DIVISION OF LABOR IN PUBLIC SCHOOLS.

We need not discuss the question so far as high schools are concerned. There is scarcely a high school left in which the division of labor has not been minutely carried out. One master teaches classics and nothing else, another mathematics and nothing else, a third history and geography, a fourth French and German, and so on in proportion to the strength of the staff. It was not always so in our high schools, but after ten years' experience it is safe to say we shall never return to the mixed system of organization. The advantages of a well-considered division are too patent, the excellent results too manifest, to admit of the least doubt. The few schools in which the mixed system still prevails are left hopelessly in the rear by smaller and more vigorous schools in which each teacher is held strictly responsible for a closely defined portion of the programme.

Why has not the principle been applied to the primary as well as to the secondary schools? It has been *partially* applied with the very best results. In all our schools employing more than one teacher, the pupils are more or less strictly graded, thus making a valuable limitation of the ground to be cultivated by each individual teacher. Further, in a considerable number of town schools there are special teachers for writing and book-keeping, drawing and music, and drill and gymnastics. So far as it has been carried this subdivision of labor has worked admirably, and we are not aware of a single instance in which it has been subjected to hostile criticism or its utility even called in question. In every department of manufacture, agriculture, etc., the principle is fully acknowledged, and writers on political economy furnish the most striking illustrations of its power and efficiency. In fact, it is generally conceded that the advancement of a given society in civilization is almost exactly proportional to the progress of the division of labor amongst its members.

We are of opinion that the time has come for a more thorough application of the doctrine to the work of education in the majority of our public schools. All men are not good for everything. Few teachers can handle all subjects equally well; most teachers are at their best in only one or two branches for which their tastes and natural endowments have specially fitted them. The skill attained by "specialiation of functions" in all manual industries is well known. Remarkable skill is equally attainable by the special teacher who concentrates his whole attention to one branch of instruction. Extraordinary power and impressiveness in number and language lessons have resulted from "specialiation" if we can believe the recorded instances in the very few primary schools where the system has had a trial.

Some of the advantages are manifest. Constant variety is produced; no teacher remains long enough with any one class to become wearisome. Unity of method in the same branch is followed throughout the whole school, so that as pupils pass from grade to grade, no time is lost in becoming familiar with new plans of instruction. Each teacher watches the progress of pupils for several successive years, and a deeper bond of sympathy and love is established than can possibly exist when the acquaintance lasts only half a year before the pupil is drafted off to a higher grade and a new teacher. There is an immense economy of energy in the matter of preparing lessons for next day's teaching; none of the work requires to be duplicated by different teachers; more time and attention can be given both to matter and to method by each teacher, and higher skill in presenting the subject attractively, forcibly, impressively, naturally results. Responsibility becomes more direct; teachers have a greater interest in working up their special department, and they begin to vie with each other in securing excellence both in themselves and in their pupils.

Incompetent teachers and lazy or backward pupils are more speedily detected, and the proper remedies can be applied to correct shortcomings. With a well-matched teaching staff the change from class to class keeps the teacher mentally alert and prevents that feeling of monotonous drudgery which is another name for death, while the appearance of a fresh instructor and a new subject acts as a stimulant to pupils equal to the exhilaration of five minutes' recess.

Will the discipline suffer deterioration by this system? We think not; the experience of the high schools does not indicate any danger in that direction. Each teacher takes charge of the deportment of one class, and any misconduct in that class is reported to this teacher to be dealt with as the case may require. A weak teacher and bad disciplinarian of course will not secure order and attention under any system, but the failure is more certain to be brought speedily under the notice of the principal

when he has charge of the class every day for certain lessons, than it could be by occasional visits under the ordinary plan. Any method of economising teaching power deserves careful attention and study, and in these days of steam and electricity we can ill afford to waste any power in merely running the machinery, still less in doing the same work several times over.

DR. McLELLAN'S PROMOTION.

For a long time the CANADA SCHOOL JOURNAL has been actively pressing the claims of the teachers' associations for further help to increase their power and usefulness. Our readers know well what remedies we have proposed for the comparative aimlessness and want of unity which have hitherto largely characterised these important gatherings. We have frequently urged the necessity for a systematic course of work at the institutes, and have emphasised the demand for skilled conductors to give them tone, vigor, and point, and to develop more fully the vast latent power that undoubtedly resides in these educational conferences.

An important and memorable step has been taken in this direction by the appointment of Dr. McLellan to the new office of DIRECTOR OF INSTITUTES. As he is also DIRECTOR OF NORMAL SCHOOLS the whole professional training of teachers will be directly under his care, and we shall secure that unity of aim and uniformity of method which is a prime necessity to any great system. This country may be considered extremely fortunate in having a man of Dr. McLellan's energy, ability, and high attainments willing to devote himself to work which must closely resemble missionary labor, and can never receive adequate recompense in any mere pecuniary reward.

Dr. McLellan has already earned the gratitude of the country by his voluntary labors in this field while burdened by the exacting duties of the inspectorship, and has established an enduring reputation of which any man might feel justly proud had he devoted his whole time and attention to that special work. He has had no peer as an educationist, with the single exception of Dr. Ryerson, since our system was established, and has done more for the elevation of the teaching profession and the advancement of popular education in this province than any other man now living. He has, in fact, been the apostle of education, and has kindled the fire of professional enthusiasm in the great work, and led the people to make large and liberal provision for education wherever he has appeared. He enters on his special mission still in full vigor, well acquainted with the whole field, matured by long and varied experience, and an earnest believer in the dignity and honor of the teacher's work. He posseses the sympathy and confidence of the entire teaching profession, and will be a powerful advocate of their rights and liberties, as well as a faithful friend to point out their shortcomings, their duties and their responsibilities.

We hope that this is only the good beginning, and that by-and-by able coadjutors will render our teachers' institutes still more attractive and efficient. The fundamental fact remains through the centuries that THE TEACHER IS THE SCHOOL, and no other money is so well invested as that spent in producing thoroughly trained teachers and in afterwards retaining them in the public service. To do this effectively will require a liberal expenditure both of money and talent. This rich province needs to make a new departure in education equal to that which took place a few years ago in her railway enterprise. It will one day be seen that our educational system is more valuable than our railway system, even from a commercial point of view, and it will receive the legitimate and ample subsidies its importance demands, and this wealthy province can so well afford. Railways wear out, but an investment of this kind is good for all time; the influence of trained and devoted teachers is perennial. Besides, the connection is most intimate between national wealth and national intelligence. The most fruitful part of our fixed capital is our national system of education, and the most valuable part of that system is the machinery for producing teachers well equipped and inspired with living power and zeal for their work. Our system has only just entered on its second stage of growth, and is still far from perfection. Ten more men of Dr. McLellan's energy and commanding abilities would be of more service to the State during the closing years of the century than ten millions of pounds of foreign capital sent over to develop her unbounded material resources, even if we paid no interest on the money. We believe that his work here will give as great an impetus to the professional education of teachers as that already communicated to secondary education during the past fifteen years. As the doctor retains his connection with the Central Committee the high schools will not lose the benefit of his guidance and counsel, while he will be relieved from the duties of the inspectorship by his energetic successor, Mr. Seath.

HISTORY FOR ENTRANCE EXAMINATION.

We note with satisfaction the following resolution passed at the late Provincial Association: "That in the opinion of the Public School Section of the Teachers' Association the history for entrance [to High Schools] is too extensive, and we recommend that the history for entrance be Canadian history and one period of English history to be set by the Department from time to time." We hope the recommendation will be acted upon, not in the sense of decreasing the amount of history required, but with a view of making boys and girls study the history of their own times and their own country first, and as the proper introduction to a more extended course after they leave the primary schools.

THE GREAT EDUCATIONAL MEETING AT MADISON, WISCONSIN.

Our American exchanges are filled with the report of the 24th meeting of the National Educational Association at Madison. Over 6,000 persons were present during the four days' sessions, and every branch of educational work in the United

States was represented, even the Catholic parochial and collegiate work through its most accomplished advocate Monseigneur Capel. The greatest harmony and good feeling prevailed throughout the meeting. All old antagonisms between different departments of instruction seem to have been sunk for the time under a generous breadth of mutual understanding. The members represented all grades and methods of teaching; the greatest enthusiasm, profound research, and marked ability are said to have characterised the discussions, both oral and written. The educational exhibits were specially interesting, and showed the great improvements in apparatus, aids, and textbooks. The points of most original interest were the admirable concentrations of material in the Kindergarten, art, and industrial departments of the exhibition. The reunions, cordial greetings, and apparently good feeling of all were pleasant features of this important gathering. As an exchange justly remarks, "It is a mighty thing for six thousand representative teachers to 'touch elbows' for a week. It does everyone good even to look into the eyes of his neighbor, to revive old friendships and establish new ones, and to go home feeling that one is even a private in the army of the Lord." We regret that the pressure of home matters makes it impossible to give even a synopsis of the proceedings.

DR. TASSIE.

By the appointment of Dr. Tassie to the principalship of Peterboro' Collegiate Institute the valuable services of that well-known educationist are once more devoted to the interests of the provincial system of secondary education. The success achieved in past years, while he was connected with the Galt Institute, gained Dr. Tassie a wide reputation, and we join his extensive circle of ex-pupils and friends in wishing him a new and still more successful career in this fresh field of labor. We are always pleased to see a veteran educationist placed in the position of highest honor and responsibility.

MR. SEATH'S APPOINTMENT.

The vacancy in the Inspectorship of High Schools and Collegiate Institutes, caused by the promotion of Dr. McLellan to a higher position, has been filled by the appointment of JOHN SEATH, M.A. Mr. Seath has long been known as one of our progressive educational workers, and his administrative and executive abilities have been shown by his success in the management of the St. Catharines Institute. He is a gold medallist in science from Queen's University, Ireland, and has had twenty-two years' experience in the teaching profession. His services in the high schools at Brampton, Whitby, Dundas, and St. Catharines have made him fully acquainted with the organization and management of our secondary schools. Mr. Seath is still in his prime, and we hope that by his energy our schools may soon reach as high excellence in English and science as they have already done in mathematics under the distinguished administration of his predecessor.

DEATH OF MR. CLARKE.

We have to add another name to the death roll for the year. Joseph A. Clarke, M.A., B.Sc., late head master of the Smith's Falls High School, departed this life Aug. 26th. Mr. Clarke was known as one of the most promising men in the province in connection with high school work. He was an excellent scholar, a most successful teacher, full of energy and enterprise, and was highly respected for his manliness and kind disposition. His unexpected demise at the early age of 38 will be deeply regretted by the profession throughout the province.

NOTES AND COMMENTS.

The progress of education in Japan is indicated by the rapid extension of the public school system. The reports for the past year show that there are 29,081 common schools, 339 over the preceding year. The number of pupils was 3,004,137, an increase of 396,960; and the number of teachers 84,765, an increase of 8,147.

The summer session of the School of Art at the Education Department, Toronto, proved highly successful. A very large number of teachers availed themselves of the free course offered by the Minister of Education, and spent five hours a day for a month on elementary drawing. A very pleasing feature was the conversazione at the close. There is no doubt that in future a still greater number will thus spend a portion of their holidays in qualifying themselves to teach this important branch of education. The result of the experiment proves the accuracy of the statement made by THE CANADA SCHOOL JOURNAL that the teachers of this province have always taken advantage of the means provided for their information.

"The Art for Schools Association" was founded in London about a year ago. The leading printsellers and publishers readily associated themselves with the society, and the London School Board warmly assisted the movement. An exhibition of pictures was held in the winter for the information of teachers and school managers, a catalogue prepared, and more than 800 pictures have since been issued to elementary schools. We have published during the year several notes of progress in this matter in Ontario. There is a great silent power in pictures, flowers, natural history collections, etc., which has hardly begun to be properly realised here. We shall most gladly receive accounts of all efforts to make the schoolroom a comfortable, cheery, happy, BEAUTIFUL, homelike place.

A recent number of *The Century* contains a noteworthy paper by President Eliot, entitled "What is a Liberal Education?" He contends vigorously for the admission on an equal footing with Latin, Greek, and mathematics, of our own language and literature, natural sciences, and modern languages, especially French and German. His plea for the study of history contains the following sentences:—"If any study is liberal and liberalizing, it is the modern study of

history. * * * * These being the just claims of history in general, the history of the community and nation to which we belong has a still more pressing claim upon our attention. That study shows the young the springs of public honor and dishonor; sets before them the national feelings, weaknesses and sins; warns them against future dangers by exhibiting the losses and sufferings of the past; enshrines in their hearts the national heroes; and strengthens in them the precious love of country. * * * * The humiliated condition of history is only made the more conspicuous by the old practice * * * of demanding * * * a small amount of Greek and Roman history—as much as a clever boy could commit to memory in three or four days." Our readers will perceive how exactly the learned president supports the views we have several times expressed on the study of history.

The true economy of teaching in an ungraded school is to make the fewest possible number of classes, and to consider both age and capacity in making your classification.—*Ex.*

It may be desirable for every man to be a specialist in mature life; but it does not follow that every child should become one in the public school.—Supt. Cummings, Ohio.

We have pleasure in publishing this month Promotion Examination papers from the county of Lanark, kindly furnished by our good friend, Inspector Michell. Shall be glad to hear from other friends throughout the Country.

The following letter has just been received by the publishers of "Gage's Canadian Readers." It will show the immense service rendered to the public and to the young from the insertion of articles such as have been selected for these books. No better testimony could be given in favor of the real merit and worth of this series of Readers:—

BOARD OF HEALTH, CITY HALL,
Montreal, August 30, 1884.

GENTLEMEN,—A few days ago a boy fell into the St. Lawrence; when taken from the water he was warm, but owing to the ignorance of the parties who removed him, he was not restored to consciousness. This circumstance induced one of our citizens to call attention to the necessity of circulating information relative to "Apparently drowned persons;" and after comparing the article in your "Educational Series," book 3, Canadian Readers, pages 119 to 124, it was deemed the best adapted for the purpose in view. My object in writing is to ask your permission to reprint such portions as may be deemed necessary on large cards, which will be distributed at the proper places by the Health Committee of this city. I have further to ask you, if you will kindly permit the three illustrations to be used for printing the 200 cards, and, if so, what you will charge for the use of the same. I will guarantee the safe return of the blocks, and that they shall only be used for the purpose named. Your early reply will oblige,

Yours truly, J. C. RADFORD,
Sanitary Inspector.

PSYCHOLOGY FOR TEACHERS.

We give below the syllabus of ten lectures on "The Development and Training of the Intellect," delivered at the College of Preceptors, London, England, during the past winter. It furnishes a fair outline of the work in Psychology and its bearing on education which must shortly be expected from all our Assistant High School Masters and First Class Public School Teachers. There are some gaps of minor importance, but on the whole this syllabus represents a good practical introduction. Meantime, we would recommend all who wish to make a beginning in this *scientia scientiarum* to read first Hopkins' *Outline Study of Man* and Thompson's *Outline of the Laws of Thought*, to be followed up by Hicock and Seelye's *Empirical Psychology* or *The Science of Mind from Experience*, and *The Principles of Science* (2nd ed. revised) by Professor Stanley Jevons. A teacher who masters any one of these books will thereby gain immensely in teaching power and will become actually worth more money, which is the most certain way to obtain a better salary. We are not aware that this course of lectures has been published, but we shall keep our readers duly informed of any such valuable professional works.

SYLLABUS.

1. Introductory—Nature of Mental Science and its bearing on Education—Mental Phenomena and their Classes—Threefold Division of Mind—Laws of Mind—Mind and Body—Laws of Mental Development—Stages of Intellectual Growth—On what Growth of Mind depends—Native Capability—Inheritance—Action of Environment, Physical and Social—Function of the Teacher in aiding Growth—Training of the Faculties.

2. Sensations or Materials of Knowledge—Intellectual value of the several Senses—The Muscular Sense and its importance—Discrimination of Sensations—Individual difference of Discriminative Sensibility—Improvement of Sense-discrimination—Effect of special callings in increasing acuteness and delicacy of Senses—Training of the Color-Sense, the Tone-Sense, etc.—Kindergarten Exercises.

3. Sensation of Perception—How Percepts are formed—Touch and Sight, and their co-operation—How the Child comes to see Distance, Solidity, etc.—How Objects are distinguished and recognized—Training of the power of Perception—Importance of actual inspection of Things as the basis of Knowledge—Observation of Things and Activity—The Object-Lesson, its nature and province—How Habits of Observation are formed.

4. Perception and Reproductive Imagination—How Images are formed—Distinctness of Images—Effects of Interest, Attention, and Repetition in producing distinct and lasting Images—How Images are called up—Laws of Association—On what firmness of Association depends—Degrees of Memory—Partial and Total Forgetfulness—Wherein consists Excellence of Memory—Intellectual value of a good Memory.

5. General and Special Memory—Individual differences of Reproductive power—How far Memory can be improved as a whole—Improvement of Memory in special directions—Verbal Memory and its relation to Memory as a whole—Remembering Names and Things—On the Management of Memory—Habits of Memory—Art of Mnemonics.

6. Reproductive and Constructive Imagination—Intellectual value of Imagination—How Imagination assists in the Acquisition of Knowledge—Realizing Description—How Imagination aids in the Discovery of Knowledge—Invention—Imagination and Feeling—On training the Imagination—Art of Description—How Models, Maps, etc., assist the Imagination—Restraining of the Imagination.

7. Imagination and Conception—How Concepts are formed—Comparison of Objects—Aids to Comparison—Abstraction—Abstraction and Generalization—How we think of Classes—Generalizing and Naming—How Children first use Words—Finding out the Meaning of Words—Discrimination of Classes—Analysis of Notions—Synthesis—Ideas of number, mathematical figure, etc.

8. On the training of the power of Abstraction—Age of Abstraction—Difficulties of Abstraction and the art of overcoming them—Distinctness and Accuracy of Concepts—Conditions of perfect Abstraction—On the art of selecting Instances or Examples—Explaining new Terms to Children—Exercising Children in rendering their notions distinct—Questioning—Logical control of Conception-Definition.

9. Judgment and Reasoning—Process of Judging—Affirming and Denying—Suspension of Judgment—Clearness, Accuracy, Sobriety of Judgment—Forms of Reasoning—Induction, its imperfections and its control—Deductive Reasoning—Relation of Reasoning to Language—Confusion in Reasoning—Logical Regulation of processes of Reasoning.

10. Growth of Intellect as depending on that of Feeling and Will—Meaning of Interest—Order of development of Feelings—Functions of the Will in relation to Knowing—Attention and its Laws—Reflex and Voluntary Attention—Concentration of Mind—Control of the trains of Thought—Relation of power of Concentration to Intellectual Attainment—Formation of Habit of Concentration.

Mathematical Department.

EDUCATION DEPARTMENT, JULY EXAMINATIONS, 1884.

ARITHMETIC.

SECOND CLASS TEACHERS.

Examiner—J. A. McLellan, LL.D.

1. Simplify—
$$\frac{(1\frac{1}{4}-1\cdot002)\div(\frac{3}{4}-\cdot006)}{\cdot002\div\cdot06}\times\cdot2\dot{9}\dot{9}\times3\cdot6.$$ Ans. $=10\frac{84}{111}$

2. A man mixes 28 lbs. black tea with 36 lbs. of an inferior quality, which costs 20 cents a pound less, and by selling the mixture at $58\frac{1}{2}$ cents a pound, gained 20 per cent. Find the cost of each kind of tea. Ans. = 40c. and 60c.

3. When the temperature of a cube of zinc is raised from 32° F. to 212° F., each dimension is increased ·3 per cent. Find the percentage of increase in the bulk. Ans. = ·9027027.

4. On a quantity of tea a grocer fixed a price to make a gain of 25 per cent., but $\frac{1}{4}$ of the quantity was found to have been damaged, and he had to reduce the price on this 25 cents a pound, and so his whole gain was $48\frac{1}{3}$ per cent. less than the sum he had expected to gain. What price did he pay for the tea? Ans. $=51\frac{2}{3}\frac{1}{3}$.

5. In a mile race between a bicycle and a tricycle their rates were as 5 to 4; the latter had half a minute's start and was beaten by 176 yards. Find the actual rate of each. Ans. = 12 mls., 15 mls. per hour.

6. If 8000 metres be equal to 5 miles, and if a cubic fathom of water weigh 13440 lbs., and a cubic metre of water 1000 kilogrammes, find the ratio of a kilogramme to a pound avoirdupois. Ans. = 1 lb.: 1 kil. = 27951 : 125000.

7. A tradesman marks his goods at two prices, one for ready money and the other at a credit of six months. What is the ratio of these prices if money is worth 10 per cent.? Ans. = 20 : 21.

8. The external dimensions of a rectangular iron chest are 2 ft. 3 in., 1 ft. 8 in., 1 ft. $2\frac{1}{2}$ in., and the sides, lid and bottom are one inch thick. Of how many cubic inches of iron is it formed? Ans. = 2205.

9. What amount of American currency is equal to £500 14s. 6d., if gold is quoted at $15\frac{1}{2}$, and the course of exchange is $4·89? Ans. = $2828·06976375.

10. A dealer has three prices for his goods—a year's credit price, a six months' credit price, and a cash price. The year's credit price is thirty-five per cent. in advance of cost, his six months' price is 6 per cent. off his year's credit price, and his cash price 10 per cent. off his year's credit price. At what advance on cost must he mark a six months' credit price on an article whose cash price is $12? Ans. = $2·65$\frac{55}{81}$.

Values—15 each question.

INTERMEDIATE AND THIRD CLASS.

1. Simplify—
$$\frac{(4\frac{1}{5}-3\frac{1}{6})\times(1\frac{1}{3}-\frac{5}{8})}{(1\frac{1}{7}-\frac{3}{14})\div(\frac{2}{11}-\frac{1}{4})}\div\frac{\frac{15}{13}}{\frac{17}{31}}$$ Ans. $=\frac{17}{1650}$

2. Find the cost of ·0625 of 112 lbs. of sugar, where one pound costs ·0703125 of 17s. $9\frac{1}{2}$d. Ans. = 18s. 9d.

3. A. and B. were employed to do a piece of work for $60. They were to be paid in proportion to their ability to work, which was 4 to 5, and to the time each worked, which was 3 to 4. How much did each receive? Ans. $=22\frac{1}{2}$, $37\frac{1}{2}$.

4. A quantity of silk was sold at a loss of 1 per cent.: had it been sold for 4s. $2\frac{1}{2}$d. per yard there would have been a gain of 1 per cent. Find the actual selling price. Ans. = 4s. $1\frac{1}{2}$d.

5. A person rides to town at the rate of $8\frac{1}{4}$ miles an hour, and after resting 35 minutes walks back at the rate of $2\frac{3}{4}$ miles an hour. The whole time occupied was 7 hours $20\frac{5}{11}$ minutes. Find the distance. Ans. $=13\frac{1}{16}\frac{5}{5}$.

6. Instead of a yard measure a draper uses a stick which is 36.35 inches long. What does he lose per cent. by so doing? Ans. $=\frac{799}{727}$ %.

7. When the course of exchange between London and New York is quoted at 4·96, London exchange (*i. e.* English money) is said to be at 2 per cent. premium. From this calculate the par of exchange. Ans. = $4·86$\frac{14}{51}$.

8. If silver is worth $1.10 per ounce, and gold $17 per ounce, find the weight of a ten dollar coin containing 37 parts in 40 of gold, and the rest silver. Ans. $=\frac{4000}{6323}$.

9. Equal volumes of iron and copper are found to weigh 77 oz. and 89 oz. respectively. Find the weight of $10\frac{1}{2}$ feet of circular copper rod, when 9 inches of iron rod of equal diameter weigh $31\frac{9}{10}$ ounces. Ans. $=516\frac{1}{5}$ oz.

10. (*a*) The expense of carpeting a room 15 feet wide was $52.80; but if the length had been a yard less, the expense would have been $46.20. Find length of the room. Ans. = 24 ft.

(*b*) A rectangular solid $4\frac{1}{2}$ feet long, $3\frac{1}{2}$ feet broad, and $1\frac{1}{3}$ feet thick, is increased 11 inches in thickness. By how much must the breadth be diminished, so that the solid may retain the same bulk as before? Ans. $=1\frac{2}{5}\frac{2}{4}=1$ ft. $5\frac{1}{9}$ in.

NOTE.—*11 marks each for 1 and 2; 6 for each of the others.*

ALGEBRA.

INTERMEDIATE AND THIRD CLASS.

Examiner—J. C. Glashan.

1. Divide $(a^4-b^4)(x^4-y^4)-4abxy(b^2x^2-a^2y^2)$ by $a^2(x^2-y^2)+b^2(x^2+y^2)+2abxy$.

2. Simplify—

(*a*)
$$\frac{\frac{n+m}{m}-\frac{m+n}{n}}{\frac{n-m}{m}+\frac{m-n}{n}};$$

(*b*)
$$\frac{(a-b)(b-c)(c-a)}{abc}+\frac{b-c}{a}+\frac{c-a}{b}+\frac{a-b}{c}.$$

3. Resolve into linear factors

(*a*) $12(3x-2y)^2-44(3x-2y)(4y-2x)-45(4y-2x)^2$;

(*b*) $4(ab+cd)^2-(a^2+b^2-c^2-d^2)^2$.

4. Show that
$$(a^2x+ay+z)(b-c)+(b^2x+by+z)(c-a)+(c^2x+cy+z)(a-b)=(a-c)(c-b)(b-a)x.$$

5. If $y+z=2a$. $z+x=2b$, $x+y=2c$, find the value of $(x+y+z)(xy+yz+zx)-xyz$ in terms of a b and c.

6. If
$$\frac{a-b}{y-x}=\frac{b-c}{z-y}=\frac{a+b+c}{2(x+y+z)},$$
prove that
$$\frac{a}{y+z}=\frac{b}{z+x}=\frac{c}{x+y}.$$

7. Solve

(*a*)
$$\frac{x-1}{x-2}-\frac{x-2}{x-3}=\frac{x-5}{x-6}-\frac{x-6}{x-7};$$

(*b*)
$$\frac{a}{x-a}-\frac{b}{x-b}=\frac{a-b}{x+c};$$

(*c*) $(x^2-9)^2-11(x^2-9)=80$.

8. Find the values of x and y that will satisfy both
$$\frac{3}{x}+\frac{2}{y}=2 \quad \text{and} \quad \frac{2}{x}+\frac{3}{y}=\frac{1}{2}.$$

9. A boy has a bag of nuts. He gives three more than two-fifths of them to his sister, six more than a quarter of the remainder to his brother, and eats three-thirteenths of what then remains, and finds he has exactly two-sevenths of the original number left. How many had he at first?

SOLUTIONS.

1. Dividend $=a^4(x^4-y^4)-b^4(x^4-y^4)-4abxy(b^2x^2-a^2y^2)$
Divisor $=a^2(x^2-y^2)+b^2(x^2+y^2)+2abxy$.
Comparing these, term by term, we see that we must have
Quotient $=a^2(x^2+y^2)-b^2(x^2-y^2)-2abxy$, and we easily verify the inspection by multiplying without removing the brackets.

2. (*a*) $(m+n)\div(n-m)$

(*b*) Let
$$\frac{(a-b)(b-c)(c-a)}{abc}=\frac{x}{a}+\frac{y}{b}+\frac{z}{c}$$
$\therefore (a-b)(b-c)(c-a)=xbc+yca+zab$

Putting successively $a=o$, $b=o$, $c=o$, we get x, y and z, $= -(b-c), -(c-a), -(a-b)$ respectively, from which it is plain that sum $=0$.—See TEACHERS' HANDBOOK OF ALGEBRA, p. 55.—See also pp. 119 and 120 for another method of solution.

3. (*a*) Put $3x-2y=k$, and $4y-2x=m$.
$\therefore$ Expression $=12k^2-44km-45m^2$
$=12k^2+10km-54km-45m^2$
$=64\,(x+y)\,(3x-5y)$
—See CANADA SCHOOL JOURNAL, March No., p. 53.
(*b*) $(a+b-c+d)\,(a+b+c-d)\,(c+d-a+b)\,(c+d+a-b)$.

4. Expression vanishes for $a=c$, $c=b$, $b=a$, and for $x=o$, and the other factor, 1, is found in the usual way. $(a-b)\,(b-c)\,(c-a)x$. See TEACHERS' HANDBOOK, p. 39, and pp. 85, 89.

5. $(x+y+z)\,(xy+yz+zx)-xyz=(x+y)\,(y+z)\,(z+x)=8abc$.
—See HANDBOOK, p. 85.

6. Assume $\frac{a}{y+z}=\frac{b}{z+x}=\frac{c}{x+y}$, then each fraction is
$=\frac{a+b+c}{2(x+y+z)}$; $=\frac{a-b}{y-z}$; and $=\frac{b-c}{y-z}$ and these must $=$ one another, which is given true. Hence the assumption was true.—See HANDBOOK, p. 123 *et seq.*

7. (*a*) Complete the divisions, cancel quotients, and transpose thus :—

$$\left(\frac{1}{x-2}+\frac{1}{x-7}\right)-\left(\frac{1}{x-3}+\frac{1}{x-6}\right)=0$$

$$(2x-9)\left[\frac{1}{x^2-10x+21}-\frac{1}{x^2-10x+24}\right]=0$$

$\therefore 2x-9=0$ is one solution, or $x=4\frac{1}{2}$.
Also $x^2-10x+21=x^2-10x+24$ is evidently another solution.

i. e. $x-10+\frac{21}{x}=x-10+\frac{24}{x}$

or $\frac{7}{x}=\frac{8}{x}$, which can only be true

when x is indefinitely increased, and $\frac{7}{x}=\frac{8}{x}=0$
$\therefore x=\infty$ is the other root.—HANDBOOK, p. 145.

(*b*) $\frac{x(a-b)}{(x-a)(x-b)}=\frac{a-b}{x+c}$; $x\,(x+c)=(x-a)\,(x-b)$
$x=ab\div(a+b+c)$.—HANDBOOK, p. 143.

(*c*) Put $x^2-9=m$, and factor, $(m-16)(m+5)=0$.
$\therefore m-16=0$, and $m+5=0$ are the two solutions.
i. e. $x=+5$, or $x=+2$.

8. Add the equations as they stand, strike out the factor 5, and $\frac{1}{x}+\frac{1}{y}=\frac{1}{2}$, combine this with (1) and (2), and $x=1$, $y=-2$

9. $10\left\{\begin{matrix}3\\13\end{matrix}\right.\left\{\begin{matrix}4\\5\end{matrix}\left(3x-3\right)-6\right\}=\frac{2x}{7}$, $x=105$.

Correspondence.

The two following letters taken from the *Halifax Herald* are of general interest. Dr. Rand while Chief Superintendent had ample means of knowing the misery of poor salaries to teachers. He has touched on the question that needs universal agitation.

TEACHERS' SALARIES.

To the Editor of the Herald :

SIR,—I observe by your issue of Saturday last that my remarks at Truro in reference to the remuneration of teachers have been considered of sufficient public interest to elicit your notice and criticism. In those remarks, I addressed myself solely to the position of teachers in connection with the systems of public education, and in the maritime provinces. I may suggest, however, in reply to your enquiry respecting the small salaries paid to most of our college professors, that as these colleges were founded and are maintained by the several denominations of Christians as an important part of their benevolent work, those who have taught in them have generally been induced to do so quite as much from benevolent impulses as from any other considerations. Until such institutions become largely endowed, or individuals establish particular chairs on liberal foundations, the remuneration of the "average professor," even though he be more learned and clever than the "average judge," must continue to be derived from other than pecuniary sources. Among the noblest supporters of these institutions are the ministers of religion. We all know how inadequate, as a rule, are the salaries paid in the maritime provinces to the members of this first and noblest of all professions. It is no part of my present duty to refer to causes or remedies in this regard; but it is plain that so long as these ministers receive a small support, they cannot be expected to promote the payment of salaries proportionate to the value of the services rendered by professors in the several colleges for which the former are each practically agents among their people. There are some ministers, however, who, very clearly recognizing the increasing difficulty of retaining the services of first-class men in these colleges on half pay, would gladly see them receive a proper pecuniary reward even though the churches fail to do their duty by those who minister to them. It but serves to give point to the suggestion I have thus ventured to offer, in reply to your enquiry, to say that in recent years both Dalhousie college and the university of New Brunswick have more liberally rewarded their professors than formerly, and that the salary of the president of Harvard college (referred to by you) is some $8,000 annually,—the friends of Harvard having two years ago donated and invested $60,000, the annual income of which is added to the president's former salary of $4,000.

The foregoing reference to the clergy leads me to say just here that were it necessary to detail the various causes which co-operate in inducing society to withhold from the teaching profession in the maritime provinces its just rewards, my experience and observation while superintendent of education in Nova Scotia and New Brunswick would warrant me in naming as very potent among these causes the fact that the teacher's work is closely associated in the public mind with that of the clergy. The teacher is justly regarded as one of the positive moral forces of the community, and in some way it comes to be thought that he, like the clergy, should not expect much salary. Has he not the consciousness of doing good? It seems, too, to be very generally forgotten that, in contrast with the sectional and often very limited local resources available for the support of the teachers of religion, the resources of the united community in its civil capacity may be drawn upon for the support of the teacher of the public school. Communities which require the services of ministers of several denominations frequently need but one teacher for their public school. In view, therefore, of the fact that the smallness of the salaries provided by the churches for their ministers has, however unjustly or unnecessarily, a powerful influence in preventing teachers from receiving a reasonable reward for their labors, it is to be hoped that teachers, notwithstanding they receive no marriage fees or "donations," will in the future, even more than in the past, seek to hasten the day when every minister of religion shall receive a salary in some respects commensurate with his labors and his deeds.

In my remarks at Truro I affirmed that the interests of the profession, the interests of education, the interests of the people—express it as you please, for there can be no real antagonism between these interests—require that a goodly number of teachers of the highest endowments and qualifications find their life-work in the educational service; that no profession, no skilled occupation even, is on a healthy basis unless it affords a career; and that the interest of the public schools requires, and it is entirely within the ability of society in the maritime provinces to furnish, such a number of important positions for teachers as shall serve as adequate prizes in the profession, I think the first two propositions are almost too plain for argument, and that a knowledge of the necessities of public school administration and of the resources of our towns and cities will convince any one of the truth of the last two propositions. No person is qualified to discharge in the public interest the duties of superintendent, inspector, or supervisor who does not reach the position through the teacher's office. There are in the maritime provinces three superintendents and twenty-two inspectors and supervisors. Halifax and other towns of Nova Scotia ought to furnish from twenty to twenty-five first-class positions for teachers, including those in the Normal School; St. John and other towns of New Brunswick (including the Normal School and the provincial university), upwards of twenty; and Charlottetown and Summerside, including the Normal School, four. Some may think these figures too low; others may think them too high. It does not matter—they cannot be far astray. If there were open to our teachers even so many really assured positions of emolument

as I have indicated, they would, on obvious principles, tend powerfully to transform the business of teaching into the profession of teaching. They would do much to enlist and retain in this great department of the public service so large a number of qualified and able educators (a far larger number, of course, than would obtain one of the foremost positions) that the four thousand men and women employed in our schools would always feel the influence and inspiration of these men, and the people everywhere receive, directly or indirectly, elevating and ennobling results through the schools of the country.

I shall reserve for another letter some additional considerations I desire to present on this subject.

Wolfville, July 24, 1884. THEODORE H. RAND.

To the Editor of the Herald:

SIR,—I judge from some of your criticisms in your issue of Saturday last, that I was imperfectly understood by your reporter in my remarks at the recent association of teachers at Truro. You will, therefore, permit me to re-state, in my own way, the substance of my observations as I reply to your strictures. I indicated, in my letter of yesterday, some seventy positions in the public educational service of the maritime provinces which, in my judgment, should afford such emoluments as to constitute them prize positions of the teaching profession. Were these positions now assured to the body of teachers, I am confident we need give but little attention, in the interests of our schools, "to opening new fields for female effort." The existence of the professional prizes would imply so clear an apprehension, on the part of all our large communities, of the relations of the teachers' work to the progress of society, that the services of a due proportion of qualified male teachers would certainly be in demand. As little attention need be given "to organizing teachers' unions," in order to elevate the profession; all lesser interests will, I am sure, be best subserved by pressing the main question. Let those who see the conditions of this problem, so vital to the welfare of society, set themselves to the creation of a sound public opinion as to the nature and value of education, and its relation to the progress of society. How shall this be done? There are many auxiliaries, but the one means essential to success is that the colleges and universities of the country shall recognize the importance of this question, and not only in their own special interests, but especially in the interests of society, provide that education both as a history and a philosophy shall be studied by all undergraduates as an important part of a liberal education. Thus every student would have set before him a rationalized conception of the ends and aims of the life of man which would carry conviction as reasoned truth. In this way, and, so far as I can see, in this way only, will the great body of those who are to fill directive positions obtain an intelligent view of the relation of education in all its departments to the progress of society, and of the nature and value of the teacher's calling. A reform begun and carried forward in this thorough fashion would certainly leaven society in due time; and so far as the teacher is concerned, the university curriculum should in this day be held to be incomplete if it does not include, in addition, a knowledge of professional principles and practice. Education is, in fact, now a distinct subject, and the importance and intimate relation of it to the future welfare of the people require that it shall be held in academic honor, and provided with academic standing room.

If we consider how liberally professional ability and skill are already remunerated among us in many departments, it will, I am sure, be found a warrantable assumption that when society believes in its inmost heart that the work of the teacher is, in the deepest and broadest sense, vital to the welfare and progress of the people, we shall see such remuneration attached to the positions to which I have specifically referred as will compare favorably with that so cheerfully accorded to the legal and medical professions, or to those skilled in mechanical or industrial pursuits. Under such conditions the men sought would be found. The law of supply and demand to which you refer would no less certainly follow a sound and deep public opinion than it now does an unsound and shallow one. But, you say, even if my suggestions were realized one teacher would offer to discharge for a salary of $3,000 the duties of a position held by another at $4,000, and another would take the position for $2,000, and presently the prizes would be gone. Such would not be the case if the salaries you suggest were the expression of a thoroughly informed public opinion. That is the one essential condition, as I have fully shown, underlying any real and permanent advance of education among us.

Your own profession, Sir, already affords positions in these maritime provinces of greater emolument than is received by any of our teachers, or professors, or college presidents. I know a gentleman who is now teaching at a salary of $1,000 who was offered $2,000 to fill an assistant position on the *Daily Telegraph*. The editor of one of our papers published in a small town, far removed from either of the capitals, received a salary of $2,000. He was once a teacher, like so many others of his profession.

A like statement could be made in reference to many who are employed as foremen or supervisors of our mechanical or manufacturing establishments. I have not any list of special facts at hand as I write, but a few weeks ago I went through the magnificent cotton mill erected at Marysville, near Fredericton, by that enterprising man, Alexander Gibson. On learning from him that he expected to have the mill in operation this autumn, I asked him what salaries he would pay for his directive labor. He replied that his "head man" would receive a free house, free fuel, and a salary of $10,000 "and so on down in proportion." This is no doubt an exceptional case, but serves to show that brains and skill are rewarded in our cotton mills. The salary of the principal of the Normal School of Nova Scotia is $1,400 and his two assistants $1,200 each. In New Brunswick the corresponding salaries are $1,200 and $1,000 (although the salaries of teachers are on an average considerably higher in New Brunswick than in Nova Scotia). Let us step into the railway offices at Moncton and compare the salaries there received with those of teachers and school officers. Passing over the salaries of $1,000, $1,200, and $1,300, we find the paymaster receiving $1,400, the traffic auditor and the assistant freight agent $1,500 each, the general storekeeper $1,950, the general passenger agent $2,400, the general freight agent $2,400, the treasurer $2,400, the mechanical superintendent $3,200, the chief engineer $3,500, and the chief superintendent $4,000. These salaries, it is well known, are declared to be the most reasonable received by railway officers on this continent. They are paid by the people, and in the interests of the people; and while the services rendered are very important, I unhesitatingly affirm that the labors of many of our teachers, and of our inspectors and superintendents, are in no way less arduous than those I have named, and are of even greater, though different, responsibility.

In order to provide for the due administration of justice and otherwise secure for the people the benefits of a legal profession, society in its legislative capacity has provided the following judges for the maritime provinces: 16 judges of the supreme court with salaries from $3,200 to $5,600; 15 county court judges with salaries from $2,400 to $3,000; while there are six judges of the supreme and exchequer court with salaries from $7,000 to $8,000. These prizes in the legal profession have been and are most important factors in securing for the people sound law and a pure administration of justice. But it is quite as important to the people that there should be a teaching profession of high standing as a legal one; nay, it is far more important from some points of view. The facts I have given will bear repetition in your columns, for they suggest forcibly the question whether justice is being meted out, or withheld, from a struggling teaching profession. True, as you have remarked, leading lawyers are in receipt of incomes equal to or above that of a supreme court judge; but it is the existence of a *bona fide* profession which has made this possible—it would be impossible apart from the prize positions of the bench. I doubt not when the time comes that each of the legislatures of these provinces, actuated by a profound conviction of the importance to the people of a real teaching profession, sacredly sets apart, and with adequate remuneration, the offices of the superintendent of education and inspectors of schools as professional prizes, it will be found (as you allege of the bench) that "the next vacancy will be filled by a gentleman who will take the position at a pecuniary sacrifice." There will at that time be those filling the position of principals of schools in our cities and towns who will command from intelligent boards of commissioners and trustees, sustained by a rational public opinion, larger salaries than the Government will provide for any of its officers. The late principal of the grammar school of St. John received a larger salary than any of the inspectors or the chief superintendent. Just in proportion as society renders it possible to sustain a *bona fide* teaching profession among us may it confidently rely on securing for the schools of the country those who will make education and not mere instruction their end, and who will bring so much philosophy and fruitful experience to their work as shall justify them in making so high a claim as teacher.

Wolfville, July 25, 1884. THEODORE H. RAND.

To the Editor of THE CANADA SCHOOL JOURNAL.

DEAR SIR,—Mr. H. B. Spotton, M.A., Principal of Barrie Collegiate Institute, deserves the thanks of the community in general and of the educational public in particular for his lately published work on the wild flowers, or rather the native plants, of Ontario—a most valuable work, useful alike to teacher and to student. It is greatly to be desired that with Part I. ("Elementary Botany") it will be in the hands of all—a strong incentive to the youth of both sexes to investigate our native flora. Two objections urged against the study of botany are—the long array of huge descriptive words, enough to deter any ordinary mortal; and the (really false) idea that only "weeds" grow wild, "flowers," with a few exceptions, belonging to the garden only. He who faithfully and conscientiously masters the two works—Elementary Botany, Parts I. and II.—above referred to, will find that the huge words are explained before their names are given, and that what he has so ungraciously styled "weeds" are plants as worthy of his consideration as his neighbour's business or his own profit. In fact, field and forest, stream and meadow, will appear to him in, as it were, a new and most attractive dress. It must be borne in mind that the outfit of the botanist is both simple and cheap—and unpainted tin box for collecting plants; a pocket lens; a few needles fastened by the eye ends into penholders (for dissecting purposes); two or more quires of soft, porous, brown paper; some weights, and a board or two to serve the purpose of a drying press; some cardboard or plain white paper, and mucilage for attaching thereto the dried specimens; and last, but not least, the two books above mentioned; the whole costing not more than three or four dollars. The educational value of natural science cannot be overestimated; for it must be borne in mind that not only is the intellect trained, but the imaginative, the emotional, the religious nature developed. Flowers, grasses, ferns, and mosses adorn not merely our gardens and our drawing and dining-room tables, but also God's holy altar—a fit offering indeed to their Maker. And in proportion as they are studied one discerns not merely beauty, but plan, design, order and law in that very beauty—means to an end, Divinely-fore-ordained.

Thanking you for inserting this letter,

Believe me, Mr. Editor,

Sincerely yours,

D. F. H. WILKINS, B.A., Bac. App. Sci.,

Math. and Science Master, Mount Forest High School.

Mount Forest, August 26th, 1884.

HIS BEST FRIEND.

[The following is a fair specimen of the kind of things our friends are sending us. We value such expressions of good-will, and treasure them up in the inner recess of the great editorial heart.—EDITOR.]

To the Editor of THE CANADA SCHOOL JOURNAL.

DEAR SIR,—No doubt by this time you have taken up your quill again. May I presume to say you spent a pleasant and profitable time, if you are as practical as theoretical concerning "The Holidays." That article took the hard expression from many a pedagogue's petrified countenance. I have taken the JOURNAL since its birth in June, 1877. It has grown large and strong since then. It is now always freighted with good things for the teacher. Of late it is more sympathetic in tone, and the teacher is compelled to recognize it as *his best friend.* Your editorials are appreciated by the teachers in this vicinity—Peel county. Your independence and individuality are what we have looked for in the past in vain. Ex-Normalite's letter in last issue is a very faithful picture of the nonentity that reigns over the Provincial Pedagogue Factory. I hold a Second "A" (1881) from that institution. But, dismissing preliminaries, allow me to say that a number of teachers have asked me to request you to publish the poem, "The Dignity of Labor," (a favourite recitation of Dr. McLellan's) in the JOURNAL under "Recitations and Readings," also to publish, if possible, more papers suitable for promotion in public schools and for entrance examinations. Hoping, Mr. Editor, that you may have time and patience to read this note and then consign it you know where,

I remain, sincerely, G. H. A.

Boston Mills, Aug. 30, 1884.

[We shall endeavour to publish the poem, and public school work shall have a fair share of attention.—ED.]

THE SCHOOL BOOK MUDDLE.

To the Editor of THE CANADA SCHOOL JOURNAL.

DEAR SIR,—I am a teacher of a rural school in the county of Kent, and am one of those who value the JOURNAL and appreciate the work of education. Being desirous of promoting the best interests of my pupils, I have been much troubled by the "Readers" difficulty. All earnest teachers must be glad that more attention is to be paid to reading in the high and public schools, but when we think of the wretched books we have had to teach from, the wonder is, not that the reading is so poor, but that it is not much worse. It is not at all necessary to mention the defects of these books, they are well known to all teachers. Yet, ruinous as the faults are, it has not hastened reform. In my school there have been three promotions since the agitation about new books began. The section consists of people of more than ordinary intelligence, who take a great interest in school matters, and desire to give their children the best advantages to be obtained; and at each promotion the question is asked, "Shall we buy the children the 'New Readers' this time?" and I have answered "No; we shall try to get along with the cast-off books of their sisters, or their cousins, or their aunts; I hope there will be a set of books ready soon." Now the supply has fallen short, and I am anxious to teach economy by practice as well as by precept. May we hope that Mr. Ross, who understands the difficulties of teaching without proper helps in a rural school, will take pity on us, and have the Readers ready by next promotion? Might I suggest that he prepare a set of tablet lessons with pictures attached. I find that I teach much better since I drew pictures on my tablets illustrating the lessons. It is, however, quite a task to draw the pictures; perhaps pasting those from the book would do as well.

It has given me pleasure to see that our arduous task of teaching history is to be lightened. The injustice of requiring young boys and girls to prepare even the outlines of the entire history of England has been apparent to all teachers, and has been a cause of discouragement to many an earnest pupil, who felt it to be useless to face such difficulties without more preparation than was possible in a given time. I am pleased to know that I shall now have some time to spare for our own history, which is so neglected as to lead many to think that it is not worth knowing.

I have a "case" to report, and would like a remedy suggested:—A little boy had been attending school some time before the teacher discovered that he is repeating, "parrot-fashion," what his elder sister has taught him of the lessons. The present teacher finds great difficulty in correcting this habit, and has been only moderately successful, for the habit is very firmly fixed.

TEACHER,

Kent County.

Tilbury East, Aug. 27, 1884.

Special Articles.

DR. McLELLAN'S LECTURE.

A large and highly intelligent audience gathered in the Town Hall last Friday evening to hear the lecture by Dr. McLellan, High School Inspector. The doctor has before appeared in Picton, and his reputation is so well established that praise of the lecture, though well deserved, is hardly called for. He is a thinking man and master of English, and has considerable oratorical power. His style, as becomes a teacher of teachers, is finished and studiously correct, but it is not stilted or pedantic. Following is a brief synopsis of the lecture:—

The schoolmaster to-day occupies a higher position than ever before. People acknowledge that great things can be done in the school-room. The teacher can promote the nation's power and the nation's greatness and freedom in future. How? By removing the chains of ignorance. A nation is not fit for self-government, its progress is not assured, unless the whole people are fairly intelligent, because the ones chosen by the people to govern them cannot well be higher in intelligence or morality than the people who choose them. No intelligent man can say that freedom can be maintained unless the masses are educated. Popular ignorance is the bulwark of despotism, the Nemesis of liberty; popular intelligence is the bulwark of liberty, the Nemesis of despotism. In France at the time of the Revolution there were 12,000,000 people who could neither read nor write. They were goaded to desperation by the oppressions of those in power, and rose in unreasoning fury to free themselves. They destroyed the bastile and other indications of their oppressed condition, but a more terrible bastile remained. The national ignorance could not be shaken by the rude fury of a maddened mob. We who have liberty and love liberty are apt to think it cannot be taken from us, but we must not forget that eternal vigilance is the price, that power has a perpetual tendency to overpass its bonds. The one certain safeguard of liberty is education of the people.

As good authority as a medical journal of good standing takes the ground that education increases crime, and to prove the contention gives statistics showing that there are more people in prison in cultivated Massachusetts than in illiterate South Carolina. This may be easily explained by the fact, first, that in Massachusetts there is a continuous and large influx of foreign element, and, second, Massachusetts, as a consequence of the education of its people, has better laws than South Carolina, and there are on its statute books rules against many crimes which go unpunished in the Southern State. Facts prove that education decreases crime, but intellectual cultivation alone will not do so. Intelligence and morality are not antagonistic; intellectual cultivation may keep the baser passions in subjection, but the moral side of the character must not be neglected.

Now and then we hear the cry that the workshops need replenishing, that education causes distaste and disability for manual labor, and that after a while we will have no hewers of wood and drawers of water. This is a pernicious cry. The aggregate of national intelligence is the measure of a nation's progress in industry and arts, and increase of intelligence means increase of power in every way. Philosophers say we cannot destroy force, nor can we add one iota to the forces of nature. One element of power we can increase, however—intelligence. There is no limit to the increase of man's power over nature. Will any man say we shall have no more inventions, no more discoveries? Present indications are that we are only in the dawn of the peerless day of knowledge and power that is yet to burst upon the world.

Increase of national intelligence means increase of power. Of this truth it is not hard to give historic illustrations. The splendid success of Germany is generally admitted to be largely due to the high average of national intelligence. In the south of Europe Nature has been lavish in her favors, but the absence of what alone can make people great makes the nations there skeletons among nations. Take the bleak north, on the other hand. Every Scotchman boasts of his country; not of its natural advantages, for Nature has been niggard in her gifts; but of the Knoxes, the Buchanans, the Mellvilles, the long list of peerless intellects which have risen because of the education of the people. And are not Scotchmen among the most moral people in the world? There is no indication there that intelligence fosters crime.

John Bull is a conservative old gentleman, but when it is time to move he moves. At the Exposition in Paris John Bull found to his chagrin and astonishment that in the industrial arts he was surpassed by continental nations. Inquiring into the cause, he found that it was because the continental workman was better educated than his British compeer. John Bull at once set to work to improve his school system, and the result was that at the next world's fair the products of English industry took place in the foremost ranks.

What is the state of education in Canada to-day? What must be done to improve it? Our school system to-day is the noblest on the face of the earth. Not even in Prussia, not in a State in the Union, is there so good a system. Dr. Ryerson, the "grand old man," the champion of the people's rights, said that an educational system should be as a man with one foot in the gutter and the other in the university. It is upon this plan that our system is based. The great object is to have a system that will be within the reach of all, a system that will meet the wants of the masses. We repel the imputation that intelligence belongs to a particular class. Right down at the bottom can be found men capable of becoming leaders of men. There are in all classes poets, orators, statesmen, capable of standing in the foremost ranks if they had but equality of opportunity.

Some say our system is not practical. An individual wants the elements of political economy, banking, etc., taught in the schools. If we gave up the three R's for these we would not get on very well. Others complain that too many "ologies" are taught in the schools. There is no real ground for this complaint. The education given in our schools would not be worthy of the name if the number of subjects were lessened. Our education can, however, and will, be made more practical than it is. It is not proposed to teach children the use of the jack-plane and other tools, but industrial drawing can with great advantage be taught. The boys and girls will not all be made artists or architects, but they may receive valuable training. A free school for the instruction of teachers in industrial drawing will be opened in Toronto this summer during vacation. It is further proposed to educate children with a view to producing special fitness for the callings they are to pursue, and to introduce music in the schools. The introduction of music must commend itself to every rightly constituted person. Shakespeare truly says that the man who does not love music is fit for treasons, stratagems, and spoils. Music in the schools would brighten school life and make it happy. The school-room should be to children a home, and even better than many a home. It is the duty of the teacher to do what he can to make the children happy. A light heart makes a strong brain. Another duty of the teacher is to be methodical. In early days no attention was paid to methods, but the fallacy no longer prevails that all a man needs to be capable of teaching a thing is to know it. The proper way to teach a child is to present an idea and teach it by the inductive

method. In old days children were given abstract propositions before they knew anything about the matters to which they referred, and their learning was merely parrot-like memorizing.

The lecturer here, in showing the great progress that has been made in the teaching of mathematics during the last decade, gave some very amusing anecdotes of his experience when first appointed inspector with stupid and ill-trained teachers, and of the tribulations of his childhood in wrestling with the venerable but now superannuated rule of three, and in trying to get on with the schoolmasters of the Squeers genus. To show the superiority of Ontario's system over all others, he said that a gentleman formerly of Canada, now the holder of a Government position in Washington, while visiting in Toronto recently, assisted at the matriculation examination in the University. He was so pleased and astonished at the great progress that had been made in mathematics that he asked the privilege of taking some of the papers with him to Washington to show the people there how far they were behind.

In closing, the lecturer deprecated flogging, strongly condemned the use of harsh and unkind words, and eloquently urged the value of kindness, patience, and good judgment on the part of teachers. He related a pleasing experience of his own boyhood. The teacher of the school he attended when a bear-footed wight was a man whose massive frame and majestic mien inspired all the pupils with exceeding awe. One evening the lecturer was trudging after the cows, thinking himself in solitude and whistling in a boy's free and easy fashion the air of "Dandy Jim from Carolina," when "the master" suddenly burst upon his frightened view a short distance ahead and approaching him in the path. The whistle died on his lips, but not before the teacher heard it in all its atrocity, and as the great man approached, the trembling lad felt like a criminal awaiting his doom. To his amazement, however, the teacher, instead of administering a reprimand, placed his hand upon the lad's head and spoke kindly, complimenting him upon his quick perceptiveness and retentive memory, and telling him that if diligent and persevering he might one day become a useful man. To those few words of encouragement and sympathy the lecturer attributed much of whatever success had attended him in life. He revered the memory of the stern old teacher, whose kindly words and sympathetic tones had influenced his destiny forever.—*Picton Times, June 5th.*

Examination Questions.

ENGLISH LITERATURE.

GRADE IV.

(*Pupils will open books on page 89.*)

1. Explain the meaning of :—"an unreasonable apprehension of hydrophobia," "put in irons," "nautical friends," "regarded his situation with the most painful solicitude," "a fixed look of determination in his face," "peerless namesake."

2. Give the meaning of :—plea, prevailed, predecessors, catastrophe, apprehensive, gratified, foiled, appreciate, vengeance.

3. "What a swimmer!" Explain the use of the *quotation marks* used in this and similar cases throughout the lesson.

4. The American brig *Cecilia*, Captain Symmes. Explain the meaning of Captain Symmes.

5. What *was* the dog's revenge? Instance another lesson in which the same kind of revenge was taken and with what results.

6. Write from memory and punctuate properly two stanzas from "The Arab and his Steed."

SPELLING.

GRADE IV.

1. Edmund's mother kissed him tenderly with tears in her eyes.
2. He was preparing to quit the ravine by the beech tree and regain the beach when the trickling of water upon pebbles attracted his attention.
3. Heroic fortitude and undaunted courage.
4. In his despondence his first words were to thank God for deliverance.
5. The machinery of the steam-engine was defective.
6. If they show any consciousness of their thrilling situation their doom is inevitable.
7. The sledge-hammer blow nearly prevented him from cutting off any more dogs' tails.
8. Buried, appetite, mutilated, avenged, vengeance, veterinary, college, manœuvre, appellation, foam-wreaths, procedure, parochial, kitchen-maid, gambols, collar, assertion, lenient, judgment, occurred, epitome, syrup.

Value 40. 1 mark off for each error.

GEOGRAPHY.

GRADE IV.

1. Define:—Peninsula, gulf, county town, strait, mountain range, desert.
2. Name the rivers of Ontario that flow into the Ottawa and Lake St. Clair respectively.
3. Name the counties, with county towns, on Lake Erie and Georgian Bay.
4. What are the outlets of the following lakes:—St. Clair, Erie, Ontario, Sturgeon, Muskoka, Mississippi?
5. Name the provinces bordering on oceans, with the capital of each.
6. What and where are:—Woodstock, Rice, Amherst, Burlington, L'Orignal, Maitland?
7. Name the exports of the County of Lanark.
8. Draw a map of Lake Ontario, and mark the counties and principal towns bordering thereon.

ENGLISH GRAMMAR.

GRADE IV.

1. Re-write the following story in a connected form:—Once there was a thief. He was in a town. He stole a mare. He stole the mare's colt. He rode the mare. The colt followed. The owner ran after him. Many persons ran after them. All kept crying "stop thief." A young Quaker was at work. He was working in a brick-yard. He heard the noise. He went to learn the cause. He did not cry "stop thief." He shouted "stop the colt." The men caught the colt. The mare would go no further. The thief was caught.
2. What is a pronoun? Use pronouns instead of nouns where you can in the following:—The farmer, one day, brought the farmer's rent to the gentleman and the farmer asked the gentleman if the gentleman would sell the gentleman's land to the farmer. The gentleman asked the farmer if the farmer wished to buy the land. The farmer replied "yes, if the buying of the land please the gentleman."
3. Divide into subject and predicate:—
(*a*) Vainly shalt thou arch thy neck.
(*b*) Without a moment's hesitation down came a sledge-hammer blow.
(*c*) O father! I hear the sound of bells.
4. Name the parts of speech in:—Oh, Joe, I did it, but I cannot tell you how sorry I am.

ARITHMETIC.

GRADE IV.

1. Write examples of addends, product, composite, quotient, and concrete.
2. A man sold a horse for $124 and two cows for $43 each. He bought a town lot for $75, a plow for $28.70, and spent all the remainder, except $13, for a waggon. How much did the waggon cost?
3. Multiply 6756 by 2075 and divide the product by the difference between ten thousand and four and $\overline{\text{MV}}$DCIX.

4. A man has a six-acre field of oats which produced 34 bushels to the acre. If oats are worth 45 cents a bushel, how many sheep at $3 each can he buy with the price of his oats?

5. Write neatly and in proper form a bill of the following:—Sold 86 lbs of butter @ 22c. a lb; 19 dozen and 6 eggs @ 14c. a dozen; 19 ducks @ 46c. a pair; and bought two hoes @ 30c. each; a scythe @ $1; and 6 lbs of tea @ 47c. a lb. How much would be still due?

6. A bullock weighs six times as much as a butcher, and they both weigh 1211 lbs; how many pounds does the bullock weigh more than the man?

7. How much will it cost a man to build 1 mile 22 poles of a fence @ 5 cents a yard?

8. A man being asked how far he had travelled answered "as many yards as 11878 times my age, which is 35." How many miles, fur., &c., had he travelled?

10 marks for each question; 75 full paper.

ARITHMETIC.

GRADE V.

1. Define:—Unit, Notation, Prime Factor, Common Factor, Least Common Multiple.

2. The product of two numbers is 152,368, and 7 times one of them is 2996. What is the other?

3. Reduce 487649 tons to pounds, and 16 bushels, 3 gallons, 2 quarts to gallons.

4. John had 314 ac. 3 rds. 24 per. of land. He kept 100 ac. 3 rds. 28 per. and divided the rest equally among his four sons. What did each get?

5. Mary knew that she had not 100 chickens, but she also knew that if she counted them two at a time, three at a time, four at a time, five at a time, or six at a time she had none left. How many had she?

6. How many boards 12 feet long and 8 inches wide will be needed to cover a floor 30 feet 8 inches long, and 24 feet 6 inches wide?

7. Make out the following bill:—4230 lbs of wheat @ $1.12 a bushel; 87,000 lbs of hay @ $14 a ton; 450 lbs of pork @ $12 per barrel.

8. John bought 35 yoke of oxen at $140 per yoke. He kept them four weeks (7 days) at an expense of five cents for each ox a day and then sold them for $4949. Find his gain or loss.

10 marks for each question. 75 full paper.

ENGLISH LITERATURE.

GRADE V.

Pupils will turn to page 172 (Third Reader).

1. Explain the meaning of:—"laborious manner of life," "a fund for educating Indian youth," "treating it as a light matter," "different conceptions of things," "make *men* of them."

2. Give the meaning of:—politeness, frivolous, commissioners, proposition, victuals, conceptions, curiosity, intrude, abruptly, hospitality.

3. "Savages we call them." To whom do *we* and *them* refer?

4. "Do us good by your proposal." What was the proposal?

5. "Ignorant of every means of living." What means of living are referred to?

6. What would be the necessaries for continuing their journey? What is the difference between a necessary thing and a luxury?

Write from memory and punctuate properly eight lines from "Home."

SPELLING.

GRADE V.

1. He translated, during his leisure, valuable authors and portions of the Holy Scripture.

2. At Alfred's proposal, multitudes assembled to witness the unrivalled spectacle.

3. The principal Saxon chiefs readily agreed to this principle.

4. After a few years' interval of peace he was made sovereign owing to his perseverance.

5. England regarded her naval supremacy as indisputable and was rendered confident by a long series of ocean victories.

6. She treated the American war with undisguised contempt.

7. Perceiving his embarrassment he made an apology.

8. Beseeching, *soldier*, foreigner, ingredients, odoriferous, *believe*, daubing, nauseous, diet, travellers, facetiously, hoar-frost, artillery, chivalry, sepulchre, scenery, descendant, biscuit, yeast, piercing, chieftain, missiles, paroxysm, felon.

Value 40. 1 mark off for each error.

CANADIAN HISTORY.

GRADE V.

1. Explain what is meant by Governor-General, Premier, Speaker, Mayor, Civil List.

2. Write a brief note on John Cabot, Roberval, Forbisher, Champlain, Brock.

3. What European nations received benefits from the discovery of America? Name the benefits received.

4. What events led to the wars of 1752, 1775, 1812; and say what was the result of each.

5. What important events happened at the following dates:—1627, 1690, 1759, 1776, 1866?

6. What were the objects of the following Acts:—Quebec Act, Constitutional Act, Union Act, British North American Act?

7. Explain the difference between a Bill and an Act.

GEOGRAPHY.

GRADE V.

1. Define and give an example of:—Canal, River, Basin, City, Province, Cape.

2. Name the principal islands of the Province of Ontario and the rivers flowing into Georgian Bay.

3. Locate the lakes of Quebec and name the principal rivers of New Brunswick.

4. Name the principal exports of the Province of Ontario and assign each to the place where it is produced in greatest abundance.

5. Trace the course of the water from Lake Nipissing to Lake Ontario.

6. Sketch the Canadian shore of Lake Huron and mark the mouths of the Saugeen, Maitland, and Aux Sable.

7. Where are the following cities located:—Kingston, Montreal, Boston, San Francisco, Hamilton, London?

8. What and where are:—Vancouver, Panama, Amazon, Walpole, Brandon, Anticosti, St. Lucas, Yucatan, Trinidad, Columbia, Terra del Fuego, Lima?

GRAMMAR AND COMPOSITION.

GRADE V.

1. Re-write in your own language:—Johnny Reid was a little boy. He was eight years old. He lived with his grandma. His parents were dead. One day a great snowstorm came on. All the roads and paths were filled up. Mrs. Reid could not get a man. She wanted a man to shovel away the snow. Little Johnny volunteered to clear away the snow. He tied on his cap. He put on his mittens. He took his little shovel. He went to work. He worked with a will. A large man came along. He was a lazy man. He was doing nothing. He spoke to Johnny. He said, "How do you expect to clear away so much snow?" Johnny did not look up. He kept working away. He replied, "By sticking at it."

2. Write answers in complete sentences to the following questions:—

(*a*) How old will you be on your next birthday?
(*b*) About how many blocks from the school do you live?
(*c*) Which subject do you like best among your studies?

3. Analyze:—

(*a*) Savages we call them.
(*b*) Get out, you Indian dog!
(*c*) How cheap and mighty a thing is kindness!
(*d*) There's tempest in yon hornèd moon.

4. Parse:—O'er the river, through the brake,
On we hie with screech and roar!

5. Correct what is wrong in the following, giving reasons:—

(*a*) The teacher learns us Reduction.
(*b*) John, leave your seat and bring some wood!
(*c*) I asked him for the lend of his knife.

6. Name three cases in which capitals ought to be used.

ARITHMETIC.

GRADE VI.

1. Write down square measure. Tell which is the greater and by how much, a surface 16 inches square, or a surface of 16 square inches. Reduce 17 ac. 19 po. 7 yds. to square inches.

2. Find cost of plastering the walls and ceiling of a room 18 feet long, 14 feet wide, and 12 feet high at 10 cents per square yard.

3. A has a stick of timber 18 feet long, 12 in. by 6 in. He wants to cut off 5 cubic feet. How far from the end must he cut it?

4. Find the least number to which if 7 be added the sum will contain exactly 8, 10, 12, 14, 15 and 18.

5. Find the least number that must be taken from the product of $864\frac{7}{9}$ and $17\frac{9}{11}$ that the remainder may contain 75 exactly.

6. Three-fourths of John's fortune=$\frac{1}{2}$ of B's, and $\frac{2}{5}$ of B's=$\frac{1}{3}$ of C's. C has $14400. Find A's and B's.

7. After paying away $\frac{1}{2}$ of my money, and $\frac{1}{4}$ of the remainder, and $5.25, I had nothing left. How much had I at first?

8. Divide $100 among A, B, C and D, so that when you give A $1 you give B $2, C $3, and D $4.

10 marks for each question.

MENTAL ARITHMETIC.

GRADE VI.

1. 225×17.

2. John bought 5 pigs at $5 each, and 8 turkeys at $\$1.37\frac{1}{2}$ each. He gave in payment 4 ten-dollar bills; how much change should he receive?

3. If 5 lbs. of flour cost 15 cents, how many cwt. could be bought for $\$7\frac{1}{2}$?

4. If 18 men can do a piece of work in 18 days, how long will it take 4 men to do the same work?

5. John owed a merchant £4, and he paid 4 payments of 17s. 6d. each; how much still remained due?

6. Three-fourths of my money less $2.50 is $1.25; how much have I?

GRAMMAR AND COMPOSITION.

GRADE VI.

1. Define:—common noun, plural number, possessive case, and active voice; and write a sentence with words underlined that exemplify each.

2. Give the rule for forming the possessive case, and decline boy, man, and fly.

3. Analyze:—

(*a*) "And there lay the rider distorted and pale.
With the dew on his brow and the rust on his mail."

(*b*) Beyond the mountain there was found a lake with an island in the centre.

(*c*) What distance is it from here to Toronto?

4. Parse:—After eating our dinner, we had a drive along a road that was bordered by trees on both sides.

5. Correct the following, giving reasons:—

(*a*) She did her work good.
(*b*) Them apples is sour.
(*c*) Neither of the sides of the square are drawn correctly.
(*d*) John is taller than any boy in his class.
(*e*) He fought against James and I.

6. Write *two* simple sentences on each of the following:—The Governor-General, the Province of Ontario, Queen Victoria, County of Lanark. Use and underline a pronoun in each sentence.

7. Write in your own words the substance of the lesson, "Integrity Rewarded."

HISTORY.

GRADE VI.

1. Define Legislature, House of Commons, Parliament, Opposition, Absolute Monarchy.

2. What benefits were conferred on England by Julius Agricola, Alfred the Great, Henry I., Simon de Montford, and Edward I.?

3. Between whom were the following battles fought, for what were they fought, name some of the results, and give their dates:—Hastings, Bannockburn, Poitiers, Bosworth Field?

4. How often have Americans invaded Canada? With what success? Give the dates of each occasion.

5. Explain the difference between Seignorial Tenure and Soccage.

6. Name discoveries made by Cartier, Champlain, and Marquette

LITERATURE.

GRADE VI.

Pupils will turn to page 67 (Fourth Reader).

1. Explain the meaning of:—"Spectral in the river's mist," "the groaning anvil scourge," "century-circled oak," "vulture beak of Northern ice," "sailor's citadel," "groaning cargo of despair."

2. "The panting team is toiling for *us*." "No craftsman bears a part in nobler toil than *ours*." To whom do these pronouns respectively refer?

3. Give the meaning of:—Keel, origin, prow, grooves, merchandise, lethean, craftsman, island, barges.

4. "Ho, strike away the bars! etc." What operation is described in this stanza?

5. No heathen drug for Eastern lands,
No poison-draft for ours.
Explain these two verses properly.

6. Write sentences containing the following words, properly used:—Draught, draft; rough, ruff; wind, wind; hearts, harts; mist, missed.

7. Write from memory one stanza from "The Lost Hunter," taking care to punctuate properly.

SPELLING.

GRADE VI.

1. Five times the dimensions of Sir Humphrey Gilbert's vessel, the Golden Hind.

2. Carnivorous tastes are essential to its existence.

3. He was so obnoxious and likely to be so mischievous that the Whigs determined to place a sentinel over him.

4. It required the experience of an inhabitant of the great Western continent to reveal his terrible position.

5. After he was discomfitted and mortally wounded he paid the victorious army this magnanimous compliment.

6. The almost unfathomable depth of these lakes is an interesting phenomenon in physical geography.

7. Fantastic, intricacy, terrific, grandeur, missionaries, recommending, garrison, surgeons, retrieving, unconsciousness, complaint, precipice, St. Lawrence, ecstacy, bachelors, species, descent, christened, volunteer, endurance, guttural, obliquely, essential, physician, villains, constellations, beleaguerers, recruits.

40 marks. 1 off for each error.

GEOGRAPHY.

GRADE VI.

1. Define, giving examples where you can:—Ecliptic, diurnal, capital, eclipse, province.

2. Through what waters and near what cities or large towns would a vessel pass in sailing from Port Arthur to Kingston?

3. For what exports are Nova Scotia and British Columbia respectively noted?

4. By what railways and through what towns would a person pass in going from Carleton Place to Walkerton?

5. Outline a map of New Brunswick, and locate the rivers, and towns of Chatham, St. John, and Fredericton.

6. Where are the stars during the day? Why cannot they be seen? Why do we sometimes see the moon and sometimes not see her at the same hours?

7. Name the kingdoms of Europe, and tell where the capital of each is situated.

8. What and where are:—Orinoco, Cayenne, Quito, Bermuda, Catoche, Magellan, Falkland, Quinte, Cayuga, Chidley, Hooker, Cleveland, Hatteras, Spree, Dunkirk, Neva, Matapan, Corinth, Madrid?

PRINCE EDWARD ISLAND.

ENGLISH.

Normal School Entrance Examination.—August, 1884.

TIME—THREE HOURS.

Value of this paper, 150. No candidate can pass who misspells upwards of three ordinary words in this paper.

1. Analyze the following passage:—

But scarce again his horn he wound,
When, lo! forth *starting* at the sound,

From underneath an aged oak,
That slanted from the islet rock,
A *damsel* guider of its way,
A little skiff *shot* to the bay,
That round the promontory steep
Led its deep line in graceful sweep,
Eddying, in almost viewless wave,
The weeping-willow twig to lave,
And *kiss*, with whispering sound and slow,
The beach of pebbles bright as snow.

2. Parse the words in italics in the above passage.

3. Write out the plurals of *cow, cloth, deer, datum, quarto, factory, species, soliloquy*, and the past tenses of the verbs *strike, swing, sing, tear, split.*

4. Give the possessive singular and the nominative and possessive plural of the nouns *pony, man, child, ox, mouse, thief, chimney.*

5. Name the different kinds of adjectives, and classify the following according to their kinds, viz.:—*lofty, large, several, ten, sixth, each, every, yon.*

6. Write in one complex sentence the following statements :—
(*a*) I got out at the Station.
(*b*) The man ought to have met me there.
(*c*) He was not to be found.

7. Correct, or justify, giving reasons, the following sentences :—
(*a*) Sense, and not riches, win esteem.
(*b*) Less than twenty tons is sufficient.
(*c*) Of all others he is the ablest man they have.
(*d*) My robe and mine integrity to heaven
Is all I dare not call my own.

8. Write a short essay (not exceeding a half page) on "Cairo and the Pyramids."

ARITHMETIC.

TIME—TWO AND A HALF HOURS.

1. Simplify $\frac{\frac{1}{21\frac{3}{5}}+\frac{1}{8}-\frac{1}{216}+\frac{1}{12}}{1\frac{1}{2}+\frac{3}{4}-\frac{7}{9}}$. Divide .0000665 by 4,375.

2. What sum is received on an average by each of 5 legatees of an estate, the first of whom gets .3̇ of it, the second .3, the third .03, the fourth .0̇3, and the fifth the remainder, amounting to $18,200?

3. Express .375 of a guinea + $\frac{3}{16}$ of a crown+ .3 of 7s. 6d.—$\frac{3}{8}$ of 2d., as the decimal of 16s.

4. A cistern can be filled in 40 minutes by one pipe and by another in 50 minutes. It has also a discharging pipe by which it can be emptied in 20 minutes. The cistern being full, in what time would it be emptied if the three pipes were open together?

5. If a tradesman marks his goods twenty per cent. above the cash price, what ready money would he take for an article marked $130?

6. If a ship's crew of 500 men have food for 48 days at the rate of 27 ounces per man per day, how many men will the same provisions serve for 60 days, allowing each man 30 ounces a day?

7. How many square feet are in a regularly tapering plank 20 feet long, and $10\frac{1}{4}$ inches at one end and $8\frac{1}{4}$ inches at the other?

8. A person transfers $10,000 from the $3\frac{1}{2}$ per cents, at 99, to the 3 per cents at $86\frac{5}{8}$: what is the difference in his income?

HISTORY AND GEOGRAPHY.

TIME—THREE HOURS.

Value of this paper, 150. No candidate can receive license who obtains fewer than 35 marks.

1. What were the terms of the Treaty called the "Mise of Lewis"?

2. Give the names and titles of five of the sons of Edward III. From which of them were Henry VI. and Richard III. descended?

3. Mention, in order, the chief events of the reign of Elizabeth.

4. What attempts were made by the descendants of James II. to wrest the crown of England from the House of Brunswick?

5. Give a brief account of the siege and capture of Quebec by the British.

6. Explain the meaning of the terms *latitude, longitude, meridian, equator, polar circle, tropic, estuary, watershed, plateau, sound, archipelago.*

7. Give the position of the following places, and state what you know about each :—Brussels, Bergen, Sheffield, Leith, Ancona, Chicago, Bahia, Ajaccio, Havre, Valetta, Leyden, Lyons, Munich, Killarney.

8. Draw a map of Ontario, showing the course of each of the principal rivers, and the location of the chief towns.

9. From what countries do we import the following articles :—Arrowroot, indigo, mahogany, ostrich feathers, sugar, sponge, and quicksilver?

Practical Department.

HISTORY: HOW TO TEACH IT.

1. *Having assigned the lesson, a short one rather than a long one, require it to be read by the class.* Brief comments, imparting additional information for the better understanding of the story, or to give it interest, should be made by the teacher, who should also designate the books in which the story is told with vividness and fullness. He should likewise be careful to have all the proper names correctly pronounced. This last is a matter of more importance than is generally supposed. The habit of mispronouncing a word is not easy to correct, as every literary man knows from experience. The boy will find no difficulty in so pronouncing the word Powhatan as to throw the stress upon the second syllable, but the teacher will find it difficult to correct the error; and the boy in after years will hesitate every time he is about to pronounce that word. It is much easier to go right after one is started right than to get right and so continue after the wrong road has been travelled. It may be objected that this way of introducing the lesson would, by giving so much help to the pupils, leave them with little or no inducement to study for themselves. Occasionally I have found a pupil so affected, but in every such case he was the laggard of the class in other studies as well. Obviously, to him even, the preliminary help was beneficial at the time, and, I ventured to hope, the good seed sprang up and bore fruit in after years.

Map-drawing, in connection with the lesson, is a very helpful feature. Require little sectional maps, showing the location of the places mentioned, to be prepared as a part of the lesson; and remember that history, without its geography, is on the same level as fiction. History and its geography should be constantly associated. Without such association, the facts are vague, of little value, and liable to slip away. With such association, they have shape, magnitude, and a home, and are, therefore, easily remembered. Why is it so difficult for some persons to remember the facts of history? Simply, because they do not locate them, or they place them so loosely as to impart no positiveness or distinctness to them. Who, after properly learning the interesting story of Braddock's expedition against Fort Duquesne, can think of the smoky city of Pittsburg, even for an instant, without having the disastrous events of that affair pass before his mind? No lesson in history is properly learned except in connection with its geography. To forget this is to fail.

2. *The recitation should be prefaced by an examination of the maps prepared by the pupils.* In this duty the teacher may be aided by a system of examination carried out by the pupils themselves, who will derive benefit by the exercise. Then have a large outline map placed before the class, and require each pupil in turn to stand, and, with a pointer, show the exact location of every place as it is mentioned by him in his answer or narrative. Permit no statement to pass until it is evident that he clearly knows where such places are. Bring out the facts of the lesson with distinctness, particularly the relation of cause to consequence; and see that all mispronunciations of proper names are corrected. During the recitation, the teacher should not hold the text-book in his hand.

He should have such a knowledge of the lesson and such a grasp of the subject as to enable him to put questions without reference to those in the book, and as circumstances may require. The teacher who depends upon set questions will find, when the day of examination comes, that he has been "cramming words into his pupils," instead of feeding them with intelligence. It should be his aim so to teach as not only to secure a successful examination for his pupils, but to infuse into their minds such a taste for the subject as will lead them with glad hearts and light steps into wider fields of research. Such teaching does not increase the number of dime-novel readers.

3. *In reviewing a topic or a series of lessons, the composition, diagram, or other written exercise plan, is found to be excellent as an auxiliary to the oral method.* In this part of the instruction, more than to any other, the matter of dates should receive attention, for here events stand out as peaks on a range of mountains. The highest peaks are the only ones whose altitude we need to know. The others, standing alongside, are of little importance, and that only comparative. Dates are the great bugbear, both of the instructor and the instructed. They are easily learned and as easily forgotten. Why will examiners, our county superintendents especially, so insist upon them? I once witnessed the examination of a class of candidates for promotion, in which the question occurred: "When did Washington resign his commission as commander-in-chief of the army?" The question was put to each one in succession, and each gave the correct year, several coupling it with December, but, as no one said the 23rd of that month, the answers were not accepted. Now, in my opinion, there were two serious objections to the question, looking at it from the interrogator's standpoint. The exact date to the day of the month should not have been required. Next, the correct answers, as far as they went (which was far enough), being rejected, the rejection had a depressing effect upon the whole class, which effect was painfully felt in the subsequent part of the examination. The examiner, in my opinion, would have been better employed in searching for needles in a haystack, for then nobody's time but his own would have been wasted, and no injury would have been inflicted upon others. In the history of our country, the dates of about twenty or twenty-five of the most prominent events should be well fixed in the mind, letting the other dates stand in the relation of cause or effect. Every great event has a train of cause-events leading to it, and a train of effect-events leading from it. The surrender of Burgoyne, in October of 1777, was a great event. In its train of cause-events, we mark the loss of Ticonderoga, and the battles of Hubbardton, Oriskany, Bennington, Bemis Heights, and Saratoga. How much would it add to our stock of valuable information to be told that the battle of Oriskany was fought on the 6th of August? One book, I observe, says it took place on the 7th. Its author deserves to be hanged.

The importance of the study of history is nowhere overrated; but the subject is not always taught with judgment and zest, and therefore does not often make its students lovers of history and self-seekers for further light. Shall we help to a better result?

—JOHN J. ANDERSON, Ph.D., *in The Pacific School Journal.*

"Measure that stream, sir," said Napoleon to one of his aides. "I have not instruments," said the aide. "Measure it, or lose your position," said Napoleon. Without another word the aide drew his visor over his eyes, looked across the stream, then turned on his heel, and with his eyes marked off the same distance. He turned to Napoleon and said, "This, sire, is the width of the stream." Here was a man who had the mental discipline which made him independent of the technical wisdom of books; had he been unable to apply his knowledge of the relation of triangles he would have lost his position.

Miscellany.

MARTY'S VARIOUS MERCIES.

Cousin Mary Singleton came down to stay with us, just about that time, and Ed hastened up to see her, as he never failed to do. When sober, Ed was the shyest and most silent of creatures, and the interview always took place with the length of the room or the piazza between them, Ed standing very erect, and making his grandest military salute with every sentence. The questions and answers did not vary a hair's breadth once in ten times.

"Good mornin', Miss Ma'," Ed always began.

"Good morning, Ed," Cousin Mary always answered.

"Glad to see ye to de old place, Miss Ma'."

"Thank you, I always love to come."

"Miss Ma' putty smart dese days?"

"Yes indeed, Ed."

"Mars' Clayty smart?"

"He never was better."

"Old Gin'al smart too?"

"He is not quite as strong as he used to be."

"Want ter know! Miss Ma' must 'member my 'spects to all on 'em when she goes back."

"I shall, with pleasure, Ed." And with a last grand salute, more rigidly angular than any, the interview ended. Cousin Mary, however, was well aware of Ed's especial tendencies, and when, on this occasion, instead of standing afar off and making obeisance, he advanced across the piazza and curled himself up at her feet, she was not at all surprised.

"Lordy me! Miss Ma'," he began, "an't I glad ye come, and an't I glad they fetched ye! Jes' the one I wanted to see! Want to take counsel with ye 'bout a party we're gwine to have."

"Very well, Ed."

"It's a pay-party. Marty's gwine to buy shingles out the makin's. Jed's Maria, she gin one, and it fetched enough to kiver their roof. But as fer old Jed! Lordy, how that 'ere old darky drinks! Miss Ma' 'd be s'prised to see him! only but jes' toddled round, the night they had it! Had a job to hold up his ugly old carkis! Rum's a bad thing, Miss Ma', a dretful bad thing!"

"It is indeed, Ed," said Cousin Mary.

"Yes, yes! bad thing! bad enuffy! Miss Ma' knows 't is! So do I! As fer gittin' high,—reel drunk,—can't say nothin' fer it! don't favor it nohow! It's agin Scripter! dunno how old Jed 'pears to stan' it! but fer gittin' a *leetle* mite off the handle, Miss Ma', jes' a *leetle* mite out the way now, like I do once into a great while, can't see no harm into it. Miss Ma' see any harm into it?"

"Certainly, Ed. I think you are destroying yourself, and making Marty very unhappy. You ought not to touch a drop."

"Bress my soul, ef that an't jes' the way Mis' Calvert talks to me! Marsa Lennie, too! Miss Ma' 's jes' like the Calverts! favors them all! favors Mars' Clayty, too! How is Mars' Clayty, Miss Ma'?"

"He is well."

"I 'm mortal fond o' Mars' Clayty! He's allers so kind and jo'ful. When he and Colonel Barton came down last time they wanted me to go down to the inlet with 'em, and take my fiddle. Says I, 'Anythink to oblige ye, Mars' Clayty, but I can't go, can't spar' the time; I got a fambly to look arter, and I must stick to my post till I die.' Colonel Barton, he says, 'Ed,' he says, 'you spar' de time to take a week's spree out o' every month,' he says, 'and you can spar' de time sure to come 'long wid us.' Says I, 'Colonel,' says I, 'you speared dat eel squar' dat time,' says I, 'but he can squ'm yit. Seein' I hev' to spar' dat week, whedder or no, I can't spar' no more!' Ye see, Miss Ma', I can't help gittin' a *leetle* mite out de way once into a gret while, *can't* help it. Gwine to stop now for a spell, I reckon, and gib Marty a chance fer to hev dat pay-party; she sets such store by her pay-party; wouldn't ye, Miss Ma'?"

"Indeed, Ed, I'd stop now and forever; you could be so happy and comfortable."

"Comfor'ble, Miss Ma'? Reckon I could! Why, th' an't a nigger nowhar, smarter 'n I be when I'm stiddy! Went down Horne Neck t' odder day, stiddy as a jedge; cradled the hull o' Great Lot, and one acre besides in Little Lot, and had it all done by half-past 'leven. Mr. Smith, the oversee', come down, and he was so s'prised, it like to took away his breaf! says he, 'Edinburgh!' says

he, 'I couldn't 'a' believed it,' says he; 'you're the smartest hand I got.' And so I be. Dunno what I *couldn'd* do, if it warn't fer gittin' a *leetle* mite out the way now and den. It takes time, ye see. Dat's why I couldn't go 'long with Mars' Clayty and Colonel Barton. Mars' Clayty mustn't feel hard on me; Miss Ma' must 'member my 'spects to him when she goes back, and to de old Gin'ral, too. I allers thinks so much o' my own folks; but 'bout dat 'ere pay-party; I was gwine fer to hev beans and bacon; would Miss Ma' hev beans and bacon?"

"That would be a very substantial dish."

"So I tell Marty, and Mother Honner: my, she's high on beans and bacon! Miss Ma' ben to see Mother Honner, yit?"

"No; I only came last night, Ed."

"Be sure! so Miss Ma' did! Den ye an't seen him yit, nor ye an't heerd him, and ye won't hear him when ye do go!"

"Hear whom, Ed?"

"Why, de hawg, Miss Ma'! Mother Honner's hawg! She's got de enlightendest hawg dat ever was raised on de West Shore! Same as a watch-dog, he is. Ef he hears suffin' comin' by de woods or 'cross de swamp, Lor', he'll grunt and grunt till de tambly's all roused up. Never grunts at de quality. When Mars' Lennie comes dat way, or Mis' Calvert's takin' de air, he lies down quiet and 'spectable wid his nose in de straw, like a hawg oughter; but when dem Squaw Neck niggers comes round, he'll snuff 'em half a mile off, and 'pears like he'd grunt hisself to pieces! Never grunts at de quality. Ef he did, I'd cut him ober myself! I won't take no disrespects for my folks! I think a heap o' my folks, Miss Ma': think a heap o' Mars' Clayty and o' Miss Ma', too, and Mars' Lennie and Mis' Calvert and Mis' Calvert's chillen. Ben a-tryin' to move away sommers, but don't 'pear to make up my mind to leave 'em. Thought mebbe I'd git higher wages; roof leaks like a riddle, too; wants shinglin'; that's what Marty's gwine to hev that party fer. Think the folks would like some plums, Miss Ma'? I'd kind o' sot my mind on gwine plummin' the day afore the party. Ef it's putty soon, I'll go plummin' for blueberries, and ef it's bumbye, I'll go plummin' for high-briers. Miss Ma' like high-briers?"

"Very much."

"Gwine to pick her a peck someday; a peck of wild strawberries, too."

"Those are past Ed; there won't be any till another year."

"Want ter know! an't that too bad! Wal, the fust kind o' broken day I git, I'll go high-brierin' for Miss Ma'. Don't bodder Miss Ma' a-talkin', do I?"

"Not at all."

"If I an't bodderin' ye, will ye gib me some 'vice 'bout that ere pay-party, Miss Ma'?"

"Certainly."

"Wal, the way I meant to write my letter was to 'vite 'em to a sail, and then buy a sheep, and whilst they 'se a-cruisin' round on de bay, me and Mother Honner 'll roast the sheep and git the table sot out. Marty must go 'long, too, and fetch de chillen' Marty must; she's a good gal, and she works smart. I married her up to 'Napolis, gwine on six year ago. She used to work to Mis' Judge Nottingham's when I was to de old Gin'al's. De way we got acquainted, Miss Ma', was dis 'ere way. I was a-gwine fer to see"—but just here a soft voice called Ed from the corner of the house nearest the kitchen, and Ed obediently uncoiled himself. "I reckon Marty wants me to hist on dat 'ere big dinner-pot," he said, "but Miss Ma' 's so kind, I'll come up ag'in, and git her 'vice 'bout dat pay-party."

It was true that Ed had tried more than once to move away from the old place, and had failed. Others had tried it, too. Cæsar moved away one week, and moved back the next. Pomp had tried it. Ben, the surliest, sulkiest fellow on the whole place, had tried it, and was successful; indeed, eminently successful, for he moved away seven times, and at last gave it up as an aimless excursion and settled down in the spot where he was born.

There was something more than mere love of home in the spell that brought them all back; there was an undying power that never loses its hold on those, either high or low, who have once become its bondmen. Poets sing and orators discourse of the love which the mountaineer feels for his upland home; but it is a languid emotion compared with the passionate attachment cherished for their birthplace by those who are born on the shores of the ocean, or of its vast estuaries. Mysterious influences are welded into heart and brain, and bone and fibre. Destiny may carry them to other scenes and carve for them brilliant careers, but nothing ever seems to them so fair and desirable as the old life by the sea. Fortune may smile upon them, and Fame sing to them with her siren tongue, and they shut their eyes and ears to all, to brood over fond memories of that enchanting spot to which they will fly when the chance opens, again and again and again. The world is everywhere, but the earthly Paradise only there. In health, the hunger is great enough, but in sickness it becomes a famine, known only to the sea's own children. They turn from every comfort and luxury that can be given, to long with a wordless, inexpressible longing that devours their very hearts,—an inexorable, unappeasable longing,—for one sight of the sapphire sea, one sound of its deep-mouthed, motherly murmur, one breath of its heavenly saltness; till, lacking these, they feel in their wild homesickness that they might better turn their face to the wall and die.

The well-disciplined, church-going, average Marylander desires to live in peace and gentleness with all mankind! but ah me! the strain and tug on every moral fibre, when certain well-meaning persons with froward hearts and darkened eyes come down to our beatific old West Shore once in a while, and, looking about in a lofty manner, pronounce it deplorably flat! Flat, say they? We want it flat. We love it flat. We praise the Creator for having made it flat. To be flat means to be fresh, free, adorable, wide-eyed, large-lunged; it means a vast range of vision from one far-off, limitless horizon to another; it means a blue, unbroken dome of heaven, with no officious projections lifting up presumptuous heads against its serene majesty. But they are more to be pitied than blamed, poor things! they deserve tender commiseration; they have been born in strong cities, in family prisons twenty-five feet by sixty, or in far-away land-locked depressions, still more remote and slow, and they know nothing of the freedom and the fascinations of our rare, amphibious life. They have not wandered countless times in among the odorous pines, and thrown themselves on the slippery matting of discarded needles beneath them, while the wind sung its faint, unearthly song above, and the cadences came filtering down through myriad leafy wires, mere sprays, at last, of quivering intonations. They have not waded and plashed in those wonderful, limpid brooks whose crumpled crystal stream ripples on over sand and pebble and floating weed till it reaches an armlet of the sea, where the tide sends volumes of salt water up into its freshness, while the brook rolls back floods of sweet water into the brine; a mile or two up, speckled trout asleep in cool pools, or glinting among the water-cresses; a mile or two down, shoals of salt-water minnows, darting through thickets of eel-grass.

But our poor people had far more practical reasons than any of these for liking to live where they did. That which "makes the pot boil" lay in profusion, dry and brittle, on the ground of the oak and pine woods; and that which alone can give the boiling a satisfactory result was to be had in plenty by all except those who were absolutely too lazy to pick up their food. They could set their nets in deep water and catch as many fish as they chose; or paddle up the creeks and stake their eel-pots to secure a haul next morning; or, for quicker effects, spear the eels in the mud at night by torchlight. If they wanted clams, they needed only to run out upon the flats with their spade and basket when the tide was out, and if they desired oysters, the beds were prolific and the rakes in the boats. Then there were crabs to scoop and ducks to shoot, and always, besides, the enchanting possibility of catching a "torop," for by this contumelious name do they designate that portly, aldermanic personage who presides at lord-mayor's feasts and other destructive pageants.

These sea-turtle, at certain seasons, come clawing clumsily up the margins of the sandy coves to lay their eggs on the shore, and go blundering back again without further parental inquietude, superbly indifferent as to whether the sun hatches them or not.

One of these rare prizes had fallen into Ed's lucky hands a day or two before his interview with Cousin Mary, and he would certainly have arrived eventually at the narration of the grand affair, if Marty's wifely repression had not nipped him untimely. He had seized the ungainly creature as it was returning to the water, and its tortuous track led him back to the newly made hollow in the sand where it had concealed its quantity of ugly eggs. Ed put it in a crawl sunk on the edge of the creek, hoping to save it till the momentous party should take place, when it would properly figure as the prime feature of the *fête*; and the eggs were carefully covered with an armful of wet seaweed, to keep all vivifying sunbeams from taking even a peep at them; for nectar and ambrosia are less delectable in some people's eyes than the contents of those vellum sacks. Ed and Sammy made delightful diurnal excursions to the crawl; they pulled out the turtle and poked it about the head to make it snap its jaws together in rage; turned it over on its back to see its flippers work, and lifted it cautiously back again by its short,

horny tail,—a happy provision of Nature for handling the cross-grained creature. Then they opened the sand and counted their treasure of eggs, and, covering them up wet and fresh, went blissfully back to Marty to tell her how beautiful it all was, and what a red-hot temper the old torop had.

It was close upon midsummer now, and the long-desired party seemed no nearer than at first, for Aunt Dolly was down with the chills, and Marty making up the deficiency by working every day at the house. But one Friday night at dusk, when the last plate was washed and put away, and Marty was slowly wiping the soap-suds from her tired hands, there came a flying scout through the twilight, dispatched from Hannah's in hot haste, with momentous information.

But the news was too prostrating to be borne alone, even by all-enduring Marty, and she came softly tapping at mother's door.

"Mis' Calvert 's gwine to be surprised now, I reckon," she said very gently, "fer I'm beat myself,—the beatest I ever was yit. They 're come."

"Who has come?" asked mother.

"All on 'em; all my pay-party, that I was gwine to have along towards fall," rejoined Marty, placidly. "Said they heerd 'twas gwine to be to-night, and we hain't gin out, nor nothin'."

"They should not have come without a definite invitation," said mother, rather indignantly. "They must go home again."

"Yas'm. Mother Honner let 'em know we hadn't no notion of havin' it; but they said they heerd it was to be, and they couldn't come so fur fer nothin', and we'd got to have it whedder or no. There's a big wagon-load chock full, from Tuckappoos, and they say they left the Squaw Neck folks walkin' over, 'bout half a mile back."

"How could they possibly hear such a thing, Marty?"

"Wal, they knew we was gwine to have it some time or 'nother, when things got settled, and I reckon Ed must 'a' ben talkin' about that torop; he sets 'mazin' by it, and Mis' Calvert knows Ed's such a pleasant boy to talk, 'specially when he's a little out of the way."

"Very well," said mother in righteous wrath, "let him exercise his gift to-night then, and amuse his company. They have chosen to come without an invitation, now let them stay without any entertainment, and go home as soon as they choose."

"Yas 'm. Mis' Calvert don't think that's kind of onsociable, eh, Mis' Calvert?"

Mother laughed in spite of herself. "I'm sure I don't know, Marty. Manage it yourself. What are you going to do?"

"Reckoned I'd ask Cæsar to take 'em out sailin' a couple of hours. Cæsar 's a mortal clever boy, and them Tuckappoosers is dead sot on sailin'. Think 's likely they 'll git aground comin' back. Tide 'll be cl'ar down by that time. Ed can kill the torop,—I 'count it a 'mazin' marcy we got that torop, mistes,—and then row up to the store and git the goodies to set out and sell; and me and Ann and Mother Honner 'll git 'em a good tea agin they come back. Mis' Calvert think that's a good way to fix it?"

"Yes, as good as can be, Marty; and now, how can I help you?"

"If Mis' Calvert felt willin' to have the big oven het up, and to sell me a little butter and flour and sugar, and that big dish of beans and bacon I got ready fer to-morrow, I'd git along bitiful."

"Very well, Marty, I'm quite willing."

So the materials were gathered together and weighed out; the great oven was soon roaring with internal fires; Aunt Dolly being in the debatable land between a fever and a chill, and much revived also with the prospect of a party, rose from her bed to make Marty a big batch of her famous soda biscuit and card gingerbread, and afterward went to the feast to help eat it. The willing guests were sent out sailing, and verified Marty's hopeful anticipations, for they ran aground on the south flat, coming into the cove, and were held fast till eleven o'clock or after, when the tide turned and set them afloat once more. What with poling round into the right position, dropping sail and heaving anchor, and leisurely landing a few at a time in the follow-boat, it was almost midnight when they reached the shore.

Here all things had gone on prosperously. The fire had promptly and dutifully begun to burn the stick, the stick had begun to heat the oven, the oven had begun to bake the cake and biscuit and beans and bacon; and all of these had come in the fullness of time to a beauteous brown, and had been carried to Mother Honner's in the clothes-basket. There they adorned the table in company with the sumptuous turtle stew and minor comestibles, and sent savory smells into the contented nostrils of the hungry guests. Ed had returned in good season with his "store-nuts," candies, and root-beer, and sat behind his stand in the corner, pouring out his heart to the crowd with the most affectionate loquacity. Cæsar took the entrance-fee at the door, and the women served. After supper Ed and 'Lias furnished the music and the dancing began. The baby had been early dosed with Godfrey's Cordial and stowed away in a basket in the loft; but long-suffering Sammy came to the party as he had been promised, and sat up late and had goodies, till he rolled over with sleep and repletion, collapsed into a shapeless lump, and was finally hoisted into the loft with the baby and the other superfluous articles.

It is not every day that the Tuckappoos and Squaw Neck people go to a party; it is not so frequent a pleasure that they can afford to let it slip too quickly through their fingers. A bird in the hand is enjoyed only so long as he remains there. So the moon sank away in the west, and the eternal stars shone calmly on, and the rosy, innocent dawn flushed up in the east and faded, and the kingly sun came regally up over the sea, and still wassail prevailed on the face of the earth.

Marty came wearily back to the house at late breakfast time, dragging the drowsy baby in her own tired arms, for Ed and Sammy were still accepting Mother Honner's somewhat reluctant hospitality. Marty was exceedingly meek and silent that day, and once in a while big tears filled her patient eyes and rolled slowly down her cheeks. The day after a late party is apt to be an aching void, even for those who have the fun, and Marty's share of the affair had been only toil and weariness. She looked so forlorn toward evening, that mother bade her go to bed and sleep off her fatigue.

"Don't 'pear to be sleepy, thank ye, mistes," said Marty; "my head's so chock full of them accounts. What we owe Mis' Calvert, and what we owe to the store, and what we borrowed of Mother Honner."

"How did the party go off, Marty?"

"Wal,—it went off,—yas'm," said Marty.

"Did you make as much as you expected?"

Marty's lip trembled, and the tears dropped as she shook her head slowly.

"It's a kind o' s'cumventin' world, Mis' Calvert, don't Mis' Calvert think so? Ed an't much of a hand to sell things, Ed an't; he's such a pleasant boy; he gin away a sight o' goodies to the chillen, and the old folks, they hommered him down reel lively on his prices. Old Jed, he let the tongs fall right on to Mother Honner's big yaller puddin' dish, that sot on the hairth keeping the torop warm, and that'll be forty cents, I 'spect. And then countin' what we owe to the store, and what we owe Mis' Calvert"—

"Never mind that, Marty, let it go as my contribution toward the party."

"Wal, now, thank ye, Mis' Calvert! that h'ists a big weight off my mind! Mis' Calvert's reel clever to us; she allers is; that makes things better; and now, if we don't have to pay more'n forty cents for the dish, and if Bruce and his wife pay us what they owe us,—didn't have no change last night,—and if Ruth Jake ever sends along the half-price for her fambly,— she said a widder with three chillen ought to git in free, all on 'em; she reckoned it warn't accordin' to Scripter to take the widder's mite, but seein' 'twas us, she'd try to pay half-price bumbye when she sells her baskets,—and if there an't nothin' more broke than I know on, I reckon now, we'll cl'ar one dollar and fifteen cents."

"Oh, Marty! poor child! I know how disappointed you are! Why, you've been thinking of this all summer!"

"I have so, mistes," responded Marty with deep humility, "but I 'spect it's the Lord's will. I allers was a ugly-tempered critter from when I was a baby. Mammy used to tell me I was the sassiest girl she had, and I'd got to git my sperit broke afore I died. So I 'spect it's the Lord's will, Mis' Calvert, for my heart *was sot* on to them shingles, powerful sot, and I'd ben a prayin' to him so much about 'em that I kind o' felt as if he'd noticed our roof hisself, and seen how much it wanted fixin'. Not that I want to fret, Mis' Calvert mustn't think it—me, with so many marcies, such a clever mistes, and Ed such a pleasant boy, too. The frost and the snow are his'n; and if it's his will they should fall on our heads next winter the way they did last, why, I reckon we can stan' it, and next summer mebbe we'll try another pay-party and have better luck."

This was the melancholy end of Marty's long-projected comedy, but there followed a little epilogue of a more cheerful nature.

Cousin Mary told the story of the pay-party in her witty little way, at a dinner given by the General soon after her return to Annapolis; and Colonel Barton proposed that all the guests who cared to partake of the fruit should deposit an equivalent in the fruit-basket for what they took out of it, for Marty's benefit.

Unanimous approval followed his suggestion ; every one was hungry for fruit and sorry for Marty, and Cousin Mary sent down to mother the next week a little fortune for her. There was enough to shingle the roof, enough to buy the shoes, and a plump little nest-egg beside, for Marty to tie up in her handkerchief and hide under the pillow.

Marty's face was as the face of an angel when she received the good news. Her very eyes laughed through her tears. "It's the Lord's doin'," she said softly, "the Lord's own doin' ! Thar he was a-contrivin' and cunjurin' 'bout them shingles, while I misdoubted him ! If I'd only stood fum to the faith, and not ben so uns'cumcised in heart, I might 'a' knowed that however beat a poor critter feels, his marcy endureth for ever."—*Olive A. Wadsworth.*

Atlantic Monthly.

THIS CANADA OF OURS.

WORDS BY J. D. EDGAR.

Let other tongues in older lands,
Loud vaunt their claims to glory,
And chaunt in triumph of the past,
Content to live in story.
Though boasting no baronial halls,
Nor ivy-crested towers,
What past can match thy glorious youth,
Fair Canada of ours ?

We love those far off ocean isles,
Where Britain's Monarch reigns,
We'll ne'er forget the good old blood,
That courses thro' our veins ;
Proud Scotia's fame, old Erin's name,
And haughty Albion's powers,
Reflects their matchless lustre on
This Canada of ours.

May our Dominion flourish, then,
A goodly land and free,
Where Celt and Saxon, hand in hand,
Hold sway from sea to sea.
Strong arms shall guard our cherished home
When darkest danger lowers,
And with our life blood we'll defend,
This Canada of ours.

THE FAULT OF THE AGE.

FROM THE INDIANAPOLIS JOURNAL.

The fault of the age is a mad endeavor
To leap to heights that were made to climb :
By a burst of strength or a thought that is clever
We plan to outwit and forestall Time.

We scorn to wait for the thing worth having ;
We want high noon at the day's dim dawn ;
We find no pleasure in toiling and saving
As our forefathers did in the good times gone.

We force our roses before their season
To bloom and blossom that we may wear ;
And then we wonder and ask the reason
Why perfect buds are so few and rare.

We crave the gain, but despise the getting ;
We want wealth, not as reward, but dower ;
And the strength that is wasted in useless fretting
Would fell a forest or build a tower.

To covet the prize, yet to shrink from the winning ;
To thirst for glory, yet fear the fight—
Why, what can it lead to at last but sinning,
To mental languor and moral blight ?

Better the old slow way of striving
And counting small gains when the year is done,
Than to use our forces all in contriving
And to grasp for pleasures we have not won.

ELLA WHEELER.

Notes and News.

ONTARIO.

At the recent session of the County Council Mr. J. J. Tilley tendered his resignation of the position of public school inspector for Durham County, a position he has filled very satisfactorily for the past sixteen years. He gives up the county inspectorship for the higher position of inspector of Model Schools in Ontario, a position he is eminently qualified to assume, having had much to do with the inauguration and framing of our excellent system of Model Schools.

To-day this county stands in the front rank in the Dominion, educationally, and Mr. Tilley has had very much to do in bringing about this satisfactory state of affairs. In 1875 he introduced competitive examinations, which were continued for five years. During the same time over $1,400 worth of prizes were awarded to the successful pupils. In 1882 he introduced a system of promotion examinations, and a full report of these examinations and also of the condition of each school has been sent out to trustees, teachers, and leading men of the county. The *Statesman* has given full particulars of these examinations as they occurred.

In 1876 Mr. Tilley was appointed a member of the central committee, which position he held for five years. He has also been an associate examiner of Normal Schools for several years, and has been for the past five years presiding examiner at the intermediate examinations, there being about forty examiners each year, and about 4,000 sets of papers examined. As we have stated, he took an active part in framing the present Model School system, and in connection with the present Minister of Education, has from time to time assisted in their inspection.

In one sense we regret Mr. Tilley's departure from the county, but in view of the promotion he has deservedly received, and the appointment of Mr. W. E. Tilley, M.A., as his successor, we must congratulate him on his preferment, and trust that the educational interests of this county will progress with the times under the new inspector.—*Bowmanville Statesman.*

A female teacher not a thousand miles from St. Marys was hearing a class in spelling and defining words. The word "orphan" had been correctly spelled, but none of them seemed to know its meaning. After asking one or two of them, she said encouragingly, "Now, try again. I am an orphan. Now, can't some of you guess what it means?" The blank look upon their faces remained, until one of the duller scholars raised his hand, and said, with no intention of being saucy, "It's some one who wants to get married, and can't."

What gunpowder did for war, the printing press has done for the mind ; and the statesman is no longer clad in the steel of special education, but every reading man is his judge.—*Wendell Phillips.*

Mr. R. Eadie, classical master in the Guelph High School, has resigned his position to accept the principalship of the first ward school, Long Island City, N. Y.

BOWMANVILLE.—The officers elected at the last session of the Durham Teachers' Association were :—President, Dr. Purslow ; 1st Vice-President, W. W. Tamblyn, M.A.; 2nd Vice-President, Miss King; Secretary, A. Barber; Treasurer, C. Keith; Executive, J. Gilfillan, Bowmanville ; G. Andrus, Port Hope ; W. W. Jardine, B.A., Newcastle ; A. J. Reynolds, Darlington ; W. C. Allin, Clarke ; R. Davidson, Hope ; W. Hickson, Cavan ; R. L. Preston, Manvers ; A. Gibbard, Cartwright ; D. Hampton, Millbrook ; Auditors, Miss J. R. Thomas and Mr. James Millar, Bowmanville. The Treasurer's report showed receipts during the year $140, and expenditure $100.30, leaving balance in hand $39.70. The programme as published was carried out ; the attendance was small. The presence of Hon. G. W. Ross, Minister of Education, added very much to the interest and profit of those in attendance.—*Bowmanville Statesman.*

Mr. D. B. Sawyer, professor of commercial science in the Provincial Normal School here, has in the press a valuable work entitled "Studies of Real Life." It treats of practical education, and its three main studies of shorthand, penmanship, and bookkeeping. Principal McCabe is writing an introduction. Mr. Sawyer this morning received an intimation through His Excellency the Governor-General's Secretary that the Marquis of Lansdowne has been pleased to allow the forthcoming volume to be dedicated to him. This is an exceptional honor to be bestowed upon an author so young in years as Mr. Sawyer, and speaks well for the character of

the work itself, which will be valuable not merely to educationists but the public generally.—*Ottawa Free Press, Aug. 6.*

Wm. Tassie, Esq., LL.D., formerly of Galt Collegiate Institute, has been appointed Principal of Peterboro' Collegiate Institute. J. H. Long, LL.B. is Modern Language master, and L. E. Horing, B.A., Mathematical master for the ensuing year.

The examination of teachers who have attended the special classes in industrial drawing recently established by the Honorable Minister of Education is concluded. Certificates are given for free-hand drawing, practical geometry, linear perspective drawing from models and blackboard drawing, but students were not compelled to attend the classes in all these subjects; if only one or more subjects were taken, the student may be examined in the remainder on some future occasion.

The examiners, Messrs. E. B. Shuttleworth, A. D. Patterson, and Dr. May, report that every candidate in practical geometry passed the necessary examination, and 63 of these took the maximum number of marks.

The following students have passed in free-hand drawing, practical geometry, linear perspective drawing from model and blackboard drawing:—A. E. Baskerville, Dundas; Jenny Brayley, Toronto; Cyrus Combe, Solina; R. A. Gray, Eglinton; Fanny L. Gillespie, Picton; R. W. Hicks, Parkdale; Mary Hunter, Belleville; M. M. Jacques, Colborne; N. C. James, Collingwood; H. D. Johnston, Strathroy; M. Jones, Toronto; Lizzie Keele, Peterboro'; Carrie D. A. Lang, Lindsay; Martha Logan, Stayner; Edwin Longman, Limehouse; C. Macpherson, Prescott; D. A. Macpherson, Crieff; J. A. Macpherson, Newmarket; A. Mueller, Berlin; Jennie Milne, Toronto; Marion H. Nelson, St. Catharines; Jessie Niven, Toronto; E. J. Norrish, Rockwood; Cassie E. Palmer, Picton; Georgina Riches, Toronto; Annie Rose, Georgetown; D. E. Smith, Kingston; Mary F. Spence, Toronto; W. H. Stevenson, Watertown; A. B. Ventress, Kincardine; T. C. Walrond, Almonte; G. E. Wightman, Ruthven; Lewellyn Williams, Windsor; M. A. Worth, Toronto; Lizzie Young, Toronto.

The following students passed in free-hand drawing, practical geometry, linear perspective, and blackboard drawing:—F. A. Bellamy, Preston; A. H. Crassweller, Blake; Frank Crassweller, Zurich; N. W. Ford, St. Thomas; John D. Knox, Parry Sound; Wm. W. Pegg, Hartford; W. Rannie, Newmarket; Julia M. Smith, Guelph; Jennie Whitelaw, Woodstock.

The following students passed in free-hand drawing, practical geometry, linear perspective, and model drawing:—Jessie Baxter, Ingersoll; D. M. Grant, Petrolea; Annie Ridley, Chatham; Thos. Rosewarne, Camlachie; Ada A. Sumner, Picton.

The following students passed in practical geometry, linear perspective, model and blackboard drawing:—J. F. Kennedy, Dundas; F. A. Walker, St. Catharines.

Passed in free-hand drawing, practical geometry, model and blackboard drawing:—Lizzie Oile, St. Catharines.

Passed in practical geometry, linear perspective, and blackboard drawing:—A. Barber, Bowmanville; F. W. Merchant, Ingersoll; Maggie Milne, Toronto; Sibbald Winterbottom, Toronto.

Passed in practical geometry, linear perspective, and model drawing:—Angus Martyn, Bath.

Passed in free-hand drawing, perspective, and blackboard drawing:—C. H. Riches, Toronto.

Passed in free-hand drawing, practical geometry, and linear perspective:—Alex. Macdonald, Camlachie; Edgar Richardson, Pickering; J. S. Deacon, Ingersoll.

Passed in free-hand drawing, linear perspective, and model drawing:—Gertrude Thornhill, Port Hope.

Passed in free-hand drawing, practical geometry, and blackboard drawing:—Priscilla Black, Toronto.

Passed in free-hand drawing, practical geometry, and model drawing:—Birdie F. Carlyle, Woodstock.

Passed in free-hand drawing and practical geometry:—W. Cassidy, Toronto; Aggie Cowan, Seaforth; Henry Gray, Milton; S. J. Hopper, Cobourg; Celeste Hudson, Ingersoll; Lyde Hudson, Bothwell; Mary M. McKinlay, Perth; C. E. M. Ridgway, Guelph; Helen Ross, Toronto; Nellie McFaul, Toronto.

Passed in free-hand and model drawing:—Hattie S. Read, Port Dalhousie.

Passed in free-hand drawing and linear perspective:—Agnes Waide, Toronto.

Passed in practical geometry and model drawing:—Kate F. Shannon, St. Catharines.

Passed in practical geometry and linear perspective:—F. Flanagan, Stratford; J. Sceddabz, Berlin; Maria Oldham, Guelph; J. E. Armstrong, Riverside; G. E. Brodench, Morrisburg; J. C. Harstone, Seaforth; A. G. J. Henderson, Whitby; J. S. Jamieson, Morrisburg; Geo. Malcolm, Mitchell; John Phillips, Toronto; Minnie Hayward, Hespeler; M. J. Keown, Toronto; K. A. Pilkington, Toronto.

Passed in practical geometry and blackboard drawing:—A. Andrews, Magaia; H. M. Goring, Homer; Wm. Forrest, Bradford.

Passed in practical geometry:—W. S. Cody, Newmarket; A. Mustard, Millbank; James Duncan, Windsor; M. E. Bryne, Toronto; Bessie McGriffin, Milton; J. R. Yeomans, Toronto; Hugh McQuami, Garden Island; A. Wark, Sarnia; T. O. Steele, Barrie; Adelle M. Lazier, Picton; Elizabeth A. McMillan, Leamington.

Passed in blackboard drawing:—L. G. Lorriman, Port Robinson (who had previously passed in the other four subjects).

Passed in free-hand drawing:—C. B. Linton, Galt; A. E. Sheppard, Port Hope.—*Globe.*

Mr. Wm. Moore, B.A. of Trinity College, Toronto, has been appointed English and Science Master in the Perth Collegiate Institute until Jan. 1st, 1885: salary at the rate of $900 per annum.

Hamilton Board of Education, July 10th.—Communications were read from Miss Dalley and Mr. A. Merrill, applying for positions as teachers; also from Miss Green, resigning her position as teacher, and thanking the board for kind courtesies while in their employ. Also from E. Houghton, applying for the position of instructor in gymnastics.

The subject of inspectorship of the public schools was then considered. The following resolution was carried:—

"It being deemed advisable that the inspector of the public schools should be a resident of the city, it is recommended that the services of Mr. J. H. Smith, our present inspector, be dispensed with. In doing so the committee desire to express their full appreciation of the valuable services rendered by him in the faithful discharge of all his duties to the board."

It was also resolved and carried that the Rev. Dr. Mockridge be appointed to fill the position of inspector of public schools in this city, and at the same salary as that paid to the late inspector.

The principal's report of the public schools showed:

	1883.	1884.	Inc.
Number on the roll for month	4463	4810	347
Average daily attendance	4053	4466	413
Per cent. of attendance	92	93	1
Total school fees	$607.70	$668.40	$50.10

The number of pupils exempt from paying school fees was 259, of which 175 were in the Boys' Home, Orphan Asylum, and Girls' Home.

In the Collegiate Institute the number on roll during the month was 333, an increase of 6 over the corresponding month last year; fees collected $90.55, an increase of $32.15; non-resident pupils 16, a decrease of 28.

One of the necessary parts of school equipment now is a gymnasium, with proper appliances for carrying on physical education. In order, therefore, that the school retain its present standing, it will be necessary to engage an instructor and fit up a gymnasium ready for use during the coming season.—*Hamilton Papers.*

Mr. Sylvanus Philips, B.A., has been appointed head-master, and Mr. D. M. Grant, B.A., assistant, in the Petrolea High School.

The report of the head-master of the Sarnia High School for the month ending 31st May ult. showed male pupils on the roll 36; female 81; total 117; average attendance male 29; females 70; total average 99; percentage of attendance 99 nearly—with the following remarks:—The report of the Inspector of Public Schools for the same period showed the total number on the roll to be 767; boys 391; girls 376; average attendance 651; and percentage of attendance 85.

O. J. Jolliffe, M.A., formerly head master at Farmersville High School, has accepted the position of classical master in the Ottawa Collegiate Institute. William Johnston, M.A., mathematical master, takes Mr. Jolliffe's place.

Hon. Mr. Ross, Minister of Education, hopes to be able to abolish intermediate examinations. It is deemed necessary, he said, in a recent speech, to erect some standard to represent graduation from a high school course, just as the B.A. indicates the end of the university course, and he would endeavor to co-operate with the university so that graduation from the high school would be the same as matriculation at the university. As to the school holidays, which interest teachers and taught at this season of the year,

Mr. Ross promises that the vacation shall in future be arranged to suit the varying conditions of the different parts of the province. In all probability, the Minister will bring in a Bill at the next session of the Legislature making these changes.—*Sarnia Observer.*

Miss Charlotte Yonge, the English writer, enumerates, in what she considers the very lowest standard of acquirement indispensable to a lady, the ability to read well aloud and to write a correct letter, arithmetic enough for accounts, grammatical language and correct pronunciation, command of the limbs and figure, and faculty to understand French. To all this must be added history enough not to confound the Greeks and Romans, with a fuller knowledge of one's own time; geography enough to avoid preposterous blunders, dexterity in needlework, and general literature and information enough to understand what people are talking about.

Colonel Parker on Language and Reading:—The first thing to be done is to find out what we teach. Things that have to be done should be learnt by doing. All attempts to teach children to talk after entering school have been utter failures. Before going to school the child has emphasis, melody, and harmony. Under existing systems the training of a child to read is a compound of a whine and a groan. Reading is not pronunciation. If there is a thing beautiful in design, but terrible in its execution, it is our system of teaching pronunciation. It destroys the melody of the voice. Reading is thinking by means of words. All mind growth is through thinking, and reading is one of the great aids to thinking. The essential thing in reading is to try to get the child to think for itself. Oral reading is one means of telling if the child thinks. Another use it has, is that it helps to give expression to the thought by means of words.

I believe that it is positively detrimental to teach children the alphabet before they learn to read. One of the great evils or mistakes of our educational system is to train a child to read a book in three or four weeks, and then keep it repeating over the same lessons for six months afterwards.

Take this cry against children reading polluted or sensational literature. What compels them to do it? It is only because they are not given good books to read in the school room. Sell the spelling books, grammars—that lead God only knows where—and the primary geographies, and you can put a good library in each school in the province. I believe that the spelling book is like the old sickle, a relic of the past, and should be placed in a museum or hung on a nail in the chimney-corner. All language should be taught with the end in view of thought revolution.

At the Ontario Teachers' Association annual meeting in Toronto the Hon. G. W. Ross delivered his address as president. The subject of most prominent interest among all civilized nations just now was to educate the whole people. The test of science and the light of psychology were applied to teaching, and the science of education was now as well defined as any other science, and with principles as well defined. But education must be considered also from the point of view of the legislator, in relation to the national life as a whole, to the social, the political, and perhaps the religious life of the entire people. Our system of education was secular. That was a necessity of the case, but it was essentially in harmony with cosmopolitan Christianity as distinguished from sectarian controversy. Our system is exempt from the evil influences arising from great wealth and from the still worse influence of what Tennyson calls "the bridge of long descent." The rich man's child sits beside the child of our poorest citizen, nor does the poor man feel that he has obtained any social victory over the rich. We have to consider what is most practically useful. Our children for the most part leave school before reaching the fifth book, therefore we must aim at teaching the most practically useful things before all mere ornamental studies. We should aim at teaching every child to read our own language intelligibly, it is the key to that vast English literature which is the grandest in the world. We should teach spelling, not of every word in the dictionary, but of all those in ordinary use. We should teach rapid and accurate calculation, not wasting time on arithmetical puzzles which are of no practical use. We should teach geography, not as a miscroscopic learning the names of every cape in China, but with intelligent study of the places most important to our own nation. History, too, is one of the most liberal and most liberalizing of studies, and he must say that he considered that the history of Canada should have a larger and more prominent place in our school course than it has as yet been given. (Loud and repeated applause.) Science too should be taught, not the science of mere text-books. But for all this the teacher must carry out the scientific maxim, "omne vivum ex vivo." It is only the live teacher who can impart life to others.

The following table shows the relative standing of the different Collegiate Institutes of the province as determined by the result of the late departmental examination for second-class certificates:

COLL. INST.	TOTAL NO. PASSED.	GRADE A.	GRADE B.
Toronto	28	10	18
Collingwood	17	11	6
St. Marys	15	10	5
Hamilton	16	5	11
St. Catharines	15	9	6
Kingston	15	5	10
St. Thomas	10	4	6
London	8	4	4
Ottawa	8	4	4
Whitby	6	4	2
Perth	6	3	3
Barrie	6	1	5
Cobourg	5	2	3
Peterborough	3	2	1
Brantford	4	2	2
Galt	2	1	1

As Hamilton, out of 16 passed, obtained only 5 certificates of Grade A, whereas St. Marys, out of 15 passed, obtained 10 of the same grade, it is evident that St. Marys, though having passed one less in number, has done a better quality of work, and is therefore justly entitled to rank ahead of the Ambitious City. This gives our school the proud position of third among the Collegiate Institutes of Ontario.—*St. Marys Argus.*

Wm. Connor, M.A., has been appointed head master of Lindsay High School *vice* W. E. Tilley, M.A., elected County Inspector of Northumberland and Durham.

Mr. Angus McIntosh, of the Brantford Collegiate Institute, has been appointed first assistant, and Mr. James McClurg, of the Petrolea Public School, gold medallist of the Provincial Normal School, second assistant master of the Toronto Model School. Miss McLellan has been transferred from the Ottawa Model School to the Model School at Toronto, and Miss Margaret Mills has been appointed to the position at Ottawa held by Miss McLellan. These appointments were made owing to the resignation of Messrs. Davidson, Dorland, and Davey, who have gone to Europe to complete their medical course.

At a recent meeting of the London Board of Education, the resignation of Miss Collins, Principal of Colborne Street School, was accepted, and it was decided to appoint Mrs. Graham to the position at the same salary as Miss Collins was receiving.

Miss Mills was promoted to the vacancy in the Central School caused by the retirement of Miss Shaw, at the same salary which the latter was receiving, and the Inspector was authorized to provide a temporary substitute in Miss Mills' place.

The circular from the Department relative to changes in the Model School, which was read at the last meeting of the board, came up for discussion, but it was decided to recommend no change in the Model School from last year. Mr. McAlpine was again recommended as assistant to Mr. Carson in the Model School, during the term, at the same salary as before, $100.

The following honors have been gained by students from our Collegiate Institute at the recent University examinations:—

QUEEN'S UNIVERSITY.—A. W. Beall, first-class in Latin, French and German, History and Geography, and second class in English. Mr. Beall also won the first general proficiency (Gunn) scholarship, worth $100.

TORONTO UNIVERSITY.—James Collins, first class in English and French, first in the second class in Classics, and fourth in the second class in History and Geography.

Miss I. G. Eastwood, third in the first class in English, sixth in the first class in French, and first class in German.

Miss D. A. Johnston, first class in French, and second class in English, German, History and Geography.

Geo. F. Jones, second class in English and in History and Geography.

Samuel King, first class in French and in German, second class in Classics and in History and Geography.

R. H. Palmer, second class in English and in History and Geography.

James A. Underhill, first class in English, and second class in History and Geography.

Nine first class and twelve second class honors were won at Toronto and four first and one second at Queen's, making a total of thirteen firsts and thirteen seconds won by our eight candidates. This record places Whitby in the second place among the High Schools and Collegiate Institutes of Ontario, the first place having been won by Toronto Collegiate Institute with twelve candidates. Relatively, Whitby holds the first place.—*Whitby Chronicle.*

Type-writing has been introduced in the Chicago Public Schools in an experimental way. A class of 25 practises two hours a week.

Mr. Wm. Ross Garrett, of Smith's Falls, has passed the matriculation examination of Queen's University at Carleton Place, and Mr. A. H. D. Ross, of the Carleton Place High School, also matriculated, carrying off the Leitch memorial, value $57.

At the recent University examination held in Toronto there were about two hundred applicants from the different High Schools and Collegiate Institutes in Ontario. Of those about one hundred and fifty are published as having passed the ordeal. Perth Collegiate Institute sent three, all of whom were successful. One, Miss Jennie McDonald, gained first class honors in English, French, German, and second class honors in History and Geography.—*Perth Courier.*

The many friends of Mr. John W. Eedy, teacher of Maple Grove school, assembled at his residence on Wednesday evening, August 6th, to bid farewell to him on the eve of his departure to Fingal, where he assumes the position of principal of the Fingal Public Schools. During the past eleven years Mr. Eedy has faithfully and successfully discharged his duties as teacher, and has also by his kind and genial manner made many warm friends who very much regret his departure from their midst. If we may judge of the success of a teacher by the success of his pupils after leaving school great credit falls due to Mr. Eedy, as many of his pupils are now filling the position of teachers in the best schools of the county. The evening was very pleasantly passed in social conversation, enlivened by vocal and instrumental music, while the children heartily enjoyed themselves at various games. In the course of the evening Mr. Eedy was made the recipient of "Chambers' Encyclopædia," handsomely bound in ten volumes, and a syphon pen, by his pupils, accompanied by an address; signed on behalf of the pupils by Rebecca McRoberts and Jennie Walden. At the close of the address Mr. Eedy, though very much affected, made a suitable reply, in which he thanked his many friends in the most feeling manner for the many favors shown him during his stay amongst them. Appropriate addresses were then made by Rev. Thos. Jackson and others present, after which the company dispersed to their several homes. Mr. Eedy carries with him to his new field of labor the best wishes of many sincere friends.—*London Free Press, Aug. 12.*

In promulgating your esoteric cogitations or in articulating your superficial sentimentalities and amicable philosophical or psychological observations, beware of platitudinous ponderosity. Let your conversational communications possess a clarified conciseness, a coacted comprehensibleness, a coalescent consistency and a concatenated cogency. Eschew all conglomerations of flatulent garrulity, jejune babblement, and asinine affections. Let your extemporaneous descantings and unpremeditated expatiations have intelligibility and veracious vivacity without thrasonical bombast. Sedulously avoid all polysyllablic profundity, pompous prolixity, psittaceous vacuity, ventriloquical verbosity, and vandiloquent rapid ty. Shun double ententes, prurient jocosity, and pestiverous profanity obscurant or apparent. In other words, speak plainly, briefly, sensibly, truthfully, purely, keep from slang, don't put on airs. Say what you mean, mean what you say, and don't use big words.

J. B. SCHOOLBOY.

PROMOTION EXAMINATION.—The results of the examinations for promotion in Grades IV., V., VI. of our town and village schools are published below. It is hoped that trustees and all interested in local school matters will carefully compare the standing of the different schools with a view to give credit to the teachers where it is due and to make enquiry as to any marked deficiency in any department. The question papers this year were a fair test of that part of the official programme prescribed to the several departments, and in a majority of cases were satisfactorily answered by the pupils. Teachers should in all cases satisfy themselves that the pupils they allow to write at these examinations have a reasonable prospect of passing. Otherwise discredit will attach to them and the school with which they are connected. Much useless labor is furthermore imposed upon the examiners, who receive nothing for the time and labor employed in reading the pupils' answers, and to whom it is a veritable labor of love:—

	Number of Applicants.	No. passed.	Maximum Obtainable.	Max. obtained.	Lowest in class.	Average for Whole class.	Average in Dec., 1883.
GRADE IV.—50 per cent. of 320 or 160 to pass.							
Almonte	14	6	340	206	79	139	126
Carleton Place	17	3	340	203	81	116	189
Perth	18	14	340	285	157	200	145
Smith's Falls	13	7	340	242	124	173	123
GRADE V.—50 per cent. of 400 or 200 to pass.							
Almonte	11	4	400	204	159	179	166
Carleton Place	18	5	400	238	121	126	208
Perth	21	13	400	264	164	208	165
Smith's Falls	10	0	400	196	139	192	183
GRADE VI.—50 per cent. of 480 or 240 to pass.							
Almonte	14	6	480	277	139	225	182
Carleton Place	17	0	480	190	131	155	210
Perth	17	17	480	356	249	287	262
Smith's Falls	6	4	380	309	218	258	266

The H. S. entrance examination constitutes the promotion examination of Form VII. in the graded schools. The results of this examination have been published.—*Perth Courier.*

The salary of J. C. Harstone, B.A., head master of the Seaforth High School, has been advanced from $1,200 to $1,300. Well done, Seaforth!

THE CANADA SCHOOL JOURNAL is the leading educational paper in the Dominion. Look after your subscription carefully, send along the latest news, report a few cases you have had in the course of your experience, write a short letter on some live topic, support your paper and try to get everybody else to lend a hand in making it really first-rate.

PRINCE EDWARD ISLAND.

Mr. John P. Hood was the recipient of a flattering address from the parents and pupils of the Thistle and Shamrock District on the occasion of his resignation of the mastership of the school.

The following appeared lately in the *Weekly Examiner*:—

SIR,—I wish to call the attention of the Board of Education to the last edition of Smith's smaller Arithmetic, which has been imported by our booksellers. The proofs have been so badly read that many misprints have been left which are annoying to the teacher and discouraging to the scholar. It is not a little provoking after one has been working for half an hour at an exercise to find that the substitution of a 5 for a 1 has made it impossible to get the answer. In the forty-second exercise, containing fourteen sums, there are two questions misprinted, and on another page there is a crease which makes it impossible to read the exercises on it. The printer is William Warwick, Toronto.

Yours, etc.,

Charlottetown, P. E. I. TEACHER.

On the 27th of June the pupils of the Hazel Grove school presented a handsome address to Miss Mary A. Maclennan, who has taught the school for the past eight years.

A correspondent in Nova Scotia sends the following, which is to hand rather late; but "better late than never":—

Last week witnessed the closing of King's College. On Tuesday evening a grand concert was given in the College hall by the Haydn Quintette Club. On Wednesday the meetings of the Alumni and Governors were held, and the cricket match was played; in the evening at the conversazione there was a brilliant and gay assemblage. On Thursday morning, at half-past seven, there was celebration of Holy Communion in the College chapel; at 10 o'clock the Encœnia proper began; academy boys, undergraduates and graduates all marched in procession from the College to the handsome new parish church, where morning prayers were said, and the Encœnia service was preached by Canon Dart. After the service Convocation was opened in the College hall and the degrees

conferred. Among the many graduates we were glad to see the fair Island represented. The much-talked-of Islander abroad will roam it seems, and will seek the halls of learning where he does roam. Rev. W. B. King, B.A., and L. W. Watson, B.A., received the degree of M.A., and among those who have passed their examinations for B.A. this year the name of Mr. Rattenbury appears. The other Islanders resident at the college we believe have passed a very creditable year.—*Examiner*, July 4th.

The half-yearly examination of the Bridgetown School was held in the school-rooms on Thursday, 17th July, in presence of the Trustees and a number of the householders of the district. The following is a list of the prizes awarded :—

ARITHMETIC.

First Class—1st prize, Edgar Burdett ; 2nd, Hannah McDonald; 3rd, Helen Hunter.

ENGLISH.

First Class—1st prize, Helen Hunter ; 2nd, Edgar Burdett ; 3rd, Hannah McDonald.

HISTORY.

First Class—1st prize, Hannah McDonald ; 2nd, William McKenzie ; 3rd, Edgar Burdett and Maggie McLeod (equal).

GEOGRAPHY.

First Class—1st prize, Edgar Burdett ; 2nd, Helen Hunter ; 3rd, Hannah McDonald.

ARITHMETIC.

Second Class—1st prize, Minnie Cantello ; 2nd, Annie McKenzie; 3rd, Bertha Vickerson.

GRAMMAR.

First Class—1st prize, Bertha Vickerson and Fred McDonald (equal) ; 2nd, Sophia Clay and Maggie Hoobley (equal) ; 3rd, Annie McKenzie.

HISTORY.

Second Class—1st prize, Stephen Clay ; 2nd, Maggie Hoobley ; 3rd, John Cantello.

GEOGRAPHY.

Second Class—1st prize, Minnie Cantello ; 2nd, John Cantello ; 3rd, Sophia McDonald and George McDonald (equal).

HISTORY.

Third Grade—1st prize, Sophia McDonald ; 2nd, Meloina Hoobley ; 3rd, Essie Burdett.

READING.

First Class—1st prize, Edgar Burdett ; 2nd, Hannah McDonald; 3rd, Helen Hunter.

READING.

Second Class—1st prize, Sophia Clay ; 2nd, Maggie Hoobley ; 3rd, Modie Martin.

READING.

Third Class—1st prize, Essie Burdett ; 2nd, Meloina Hoobley ; 3rd, Sophia McDonald.

PENMANSHIP.

1st prize, Hannah McDonald.

GENERAL EXCELLENCE.

1st prize, Edgar Burdett.

After the examination the prizes were distributed to the successful competitors by Miss Nelson, the teacher, at whose expense they were procured. All present expressed themselves pleased with the progress of the school since last examination, and highly commended the efforts of both Miss Nelson and Miss Bulpit in the interest of their pupils. Both teachers appear to be in earnest, and judging from the progress of the school are highly successful.

By order,
HUGH MCLELLAN.

NEW BRUNSWICK.

The country schools re-opened, after the vacation, on the 11th August, and the schools in cities and towns on the 25th.

One hundred and sixty-five student-teachers were enrolled at the Provincial Normal School at the commencement of the current term, August 11th. These represent the different counties as follows :—York, 55; King's, 17; St. John, 11; Charlotte and Queen's, 10 each ; Carleton and Westmoreland, 9 each ; Kent and Northumberland, 8 each ; Gloucester and Restigouche, 7 each ; Albert, 6 ; Sunbury and Victoria, 4 each. Seven are Acadian French.

The French Preparatory Department was closed in May last, when the teacher in charge, Mr. Alphée Belliveau, was appointed an Instructor in the Normal Department. He takes the subjects of Arithmetic, Geography, Elementary Grammar, Bookkeeping, etc.

Miss Gregory, whose invaluable services in the institution ever since it was established in Fredericton are well known, has found it necessary to give up a portion of her work. She will, however, continue to give instruction in Domestic Economy (to the girls), Physiology and Hygiene.

The Principalship of the Model Schools became vacant in July, by the resignation of Mr. Geo. E. Croscup, A.B., who had accepted a lucrative position in New Jersey. His place has been filled by the appointment of Mr. John Rodgers, who has a good record as a successful teacher. The work which Mr. Croscup was doing as Instructor in Natural Science in the Normal School will now devolve upon Mr. Creed, who has for several years had several kindred subjects to deal with, in addition to the Mathematics and Industrial Drawing.

At the Provincial examinations held in June, licenses were obtained as follows :—Grammar School Class, 2 ; First Class, 19 ; Second Class, 113 ; Third Class, 74 ; total, 208. A considerable number failed to obtain the class sought.

County Teachers' Institutes were held in six counties simultaneously on the 10th and 11th of July, viz.: at Fredericton, Campbellton, Richibucto, Shediac, St. Stephen, and Woodstock. The Sunbury County Institute met early in June, that of Albert County on the 28th and 29th of August,—and that of Northumberland is to meet on the 2nd and 3rd of October. The proceedings of some of these institutes are not at present at hand.

The Kent County Institute elected the following officers :—C. H. Cowperthwaite, president ; George A. Coates, vice-president ; Jas. McIntosh, sec.-treasurer ; Clara A. Young, asst. secretary ; Sarah Hutchinson and John Gillies, additional members of committee. The time was devoted mainly to illustrative lessons and discussions.

The officers and committee of management elected by the Charlotte County Institute were Inspector Ingram B. Oakes, A.M., president ; J. P. Horsman, A.B., vice-president ; P. A. Hartt, sec.-treasurer ; S. W. Irons, asst. secretary ; John Lawson, Miss Alexander, and P. G. McFarlane. Papers were read by Miss L. A. Veazey, P. G. McFarlane, W. O. Sullivan, and M. L. Young. There were several illustrative lessons, and interesting discussions on the various subjects brought forward.

At the Carleton County Institute, papers were read and illustrative lessons given by Messrs. P. B. Carvell, Robt. Landells, A.B., A. B. Boyer, J. C. Graves, and Zach. Nason. Inspector Gaunce delivered a public lecture on the subject of "Patriotism—how it may be fostered by the Public Schools."

The York County Institute chose the following managing committee and officers :—Inspector G. W. Mersereau, A.B., president ; Miss Louisa Picard, vice-president ; J. Meagher, sec.-treasurer ; Miss Ella Thorne, H. C. Creed, A.M., and B. Mullin. Papers were read by J. H. Hoyt, A.B., H. V. Bridges, A.B., and B. Mullin ; and an illustrative lesson was given by Mr. Creed.

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

The semi-annual meeting of the North Simcoe Teachers' Association was held on the 6th and 7th of June in the Model School, Barrie. About sixty teachers were present. The President, Inspector Morgan, in the chair. Minutes of the former meeting read and adopted. The first subject on the programme was Phonic Reading, by A. C. Osborne, which he ably and practically exemplified by means of an infant class. The discussion which followed showed that the teachers present recognized the great necessity for the adoption of separate characters to represent the different vowel sounds. The second subject was Intellectual Teaching, by W. H. Finney, which he treated in an able manner. He contrasted the career of two teachers, the one a Rote teacher and the other an Intellectual teacher, and showed the superior results produced by the latter. He considered that the teachers should look more to the future than the present, and train pupils for the active duties of after life. In reference to school management he thought that the teacher should find out the natural disposition of each pupil and govern accordingly. He thought that phrenology would assist the

teacher in this matter. He preferred government by affection and reason rather than by corporal punishment. A full discussion followed, led by Mr. T. O. Steele. The third subject, "How may the usefulness of our Association be increased?" was ably handled by Mr. Morgan. He advocated one yearly meeting of the Association, to last three days, and in addition to the County Association to have district associations to meet also once in the year. The ideas of the Inspector were embodied in a resolution and adopted by the Association, and a committee appointed to arrange the districts, whose report was adopted. The fourth subject was "The advisability of appointing a non-political superintendent of education and council of public instruction" by Mr. J. M. Hunter. He thought that a change in the system would be for the benefit of education, that the various schemes would be better matured before being brought before Parliament, that at present educational matters were discussed from a party point of view, and that under present circumstances the Minister of Education must necessarily be an ardent politician and favor his party though intending to be impartial. The chief superintendent should be merely an executive officer to carry out the views of the council of public instruction. Mr. Hunter's view of the matter was strongly supported by Inspector Morgan and opposed by T. O. Steele and others. The taking of a vote was postponed until Saturday morning, and resulted in a majority in favor of Mr. Hunter's resolution. The fifth subject taken up was Music, by Messrs. Morgan and Garvin, who exemplified by means of a class of young pupils the advantages and simplicity of the "Tonic sol fa system," and advised its introduction into our schools. A resolution making the membership fee 25 cents, and giving each member the privilege of taking from one to three school journals by paying one-half of their cost, was adopted—cost of any one journal not to exceed $1. The next subject was "Teachers' Certificates." In the absence of Mr. Williams, Inspector Morgan took up the part entitled "General character of the examinations." He showed that it would be much better to make the standard for 3rd class certificates somewhat lower but insist on a percentage of 75 or 80 in each subject. Views supported by the Association. The next point, "Extensions and permits," was taken up by Mr. T. O. Steele, who moved, seconded by Mr. Hunter, "That the system of granting permits and extensions has a very injurious tendency, both as regards the schools and teachers, and is therefore detrimental to the progress of education." Mr. Steele showed that the granting of permits and extensions lowered the status of the profession, and inflicted an injury upon teachers generally by keeping down salaries, and was a fraud upon the public. He thought that a 3rd class certificate should not be renewed more than once, and then on the same basis as at first granted. He considered that it would have been much better for the Minister of Education to have extended the 3rd class certificates now expiring for one or two years to give time for preparation for a new examination on an educational basis, than to place Inspectors in the very undesirable position of adding marks to those made by candidates. The resolution was discussed and adopted by the Association. The election of officers resulted as follows:—President, Inspector Morgan; vice-president, Mr. Hay; secretary-treasurer, Mr. Jennison; committee of management, Messrs. Sneath and Steele and Misses E. King, L. Lee, and E. Applebee; delegates to Provincial Association, Messrs. Hay and Steele.

ONTARIO.—The twenty-fourth annual convention of the Ontario Teachers' Association opened at the Education Department Tuesday, August 12. There was a good attendance of teachers throughout the Province. Hon. G. W. Ross, Minister of Education, President of the Association, occupied the chair. The meeting opened with reading a portion of Scripture, followed by prayer by Mr. Robert McQueen, of Iroquois. After the minutes of the last meeting were confirmed, Mr. J. H. Smith, of Ancaster, was appointed recording secretary. The different sections of the Association were then formed, as follows:—High School Section, H. J. Strang, Goderich, Chairman; Public School Inspectors' Section, Mr. D. A. Maxwell, Amherstburg, Chairman; and Public School Section, Mr. James Duncan, Windsor, Chairman. The Treasurer's statement showed the finances of the Association to be in a flourishing condition. The meeting then adjourned till 2 p.m. *Afternoon Session.*—There was a larger attendance in the afternoon than in the morning. The President took the chair at two o'clock, and after routine proceedings Mr. James L. Hughes, Public School Inspector for the city of Toronto, read an exhaustive paper on "Industrial Education." By an industrial training he meant anything that would tend to enable the hand to represent more accurately in material form the thoughts of the mind. He held that the sooner the industrial training of a child began the more perfect would be his development. The hand, he said, was the agent of the mind, and formed one of the means by which the mind acquired knowledge. He dwelt for some time upon the good results in the way of industrial education derived from the Kindergarten system of teaching. The child during his first year at school should deal chiefly with real things as he did before he entered school, and he should use things not that he might learn about the things themselves, but that through using them he might incidentally learn new facts, discover new principles, develop his perceptive faculties and define his conceptions. Industrial drawing should be taught in all the classes. The thanks of the profession were due to the Minister of Education for the progressive and liberal course he had recently adopted in providing free of charge for teachers in Ontario the means of learning how to teach this important subject, by establishing vacation drawing classes in charge of competent and experienced masters. Mr. Hughes exhibited some splendid specimens of work done under the Kindergarten system, such as paper posting, paper folding, sewing on cardboard, etc.

Considerable discussion followed among the members of the Association with reference to the paper.

INCREASED LEGISLATIVE AID.

Mr. William McIntosh, of Madoc, said the subject upon which he had been called upon to speak—the Increased Legislative Aid to Public Schools—was ripe for discussion. The Educational system was a State system in part, and indeed it was almost entirely a State system as regards Public Schools. The State aided in the support of Public Schools with the object no doubt of encouraging education. Did the State contribute to the support of the Public Schools in a degree commensurate with the control it exercised over the system? The educational system was instituted by the State, and to a large extent the system had always been in advance of public opinion. What control did the State exercise over the system? The State controlled to a limited extent the people in the erection of Public School buildings. The people were controlled by the State in reference to the qualification of teachers, in regard to the hours of study, in regard to vacations and a great many other things, and they had to abide by it. He found according to the last report of the Minister of Education that the sum of $251,356 had been given to Public Schools, while the total receipts for the maintenance of Public Schools were $3,469,990. The grant *per capita* of the school population was a little over fifty cents. The number of teachers in round figures was about 7,000. Would anyone say that the grant of 50 cents per pupil was at all commensurate either with the control the State exercised over the schools or the vast importance of the work done by the Public Schools? He compared the support given to Public Schools with the support given to High Schools and the higher educational branches. The aid to the High Schools during the year was $84,304, and the total amount received for the support of the High Schools was $373,000. He did not wish the grant to the High Schools lowered, but he thought the grant to Public Schools might be raised so as to compare favourably with High Schools. The Public Schools were the foundation of higher education. It was the duty of the State and those who controlled the system to attend more particularly to the education of children who were in the first, second, and third classes. He also suggested new regulations with reference to the distribution of the legislative grants. For a great many years the legislative grants had been divided among the municipalities according to the average attendance. This system was fraught with many evils. After some discussion, during which a number of members of the Association gave different opinions with reference to the distribution of the legislative grants, but nearly all being in favor of an increased grant, the following resolution was moved by Mr. A. Campbell, seconded by Mr. A. McKinnon:—"That in the opinion of this Association the legislative and municipal grants should be largely increased and should be apportioned upon the basis of local effort, as shown by the rate on the dollar levied for ordinary school expenses, and by the grade of certificate of the teacher employed, and the character of the school accommodation."

In amendment, it was moved by Mr. J. H. Smith, seconded by Mr. J. R. Miller, "That the whole matter of increased legislative aid to Public Schools, and the method of distributing it, be referred to a Committee composed of the following persons:—Messrs. Fotheringham, McKinnon, Campbell, Burrows, McIntosh, McKee, Dearness, Brown, and Clapp, to report at a future session of this Convention." The amendment was carried, and the Convention adjourned till 8 p.m. *Evening session.*—In the evening, not only was there a very large attendance of teachers, but many prominent citizens also were present. The main feature of the evening was the President's annual address, delivered by Hon. G. W. Ross, Minister of Education and President of the Association.

THE PRESIDENT'S ADDRESS.

Hon. G. W. Ross, on rising, was received with loud applause. He said:—When appointed your president a year ago I had no expectation that I should, at the next meeting, be so burdened with official cares as to be almost practically debarred from delivering the annual message expected from your chief officer. It is, however, a source of considerable relief to believe that I can claim your indulgence, inasmuch as the time which might have been spent in preparing an address has been devoted to the interests of the profession in which you are so earnestly engaged. The most noticeable feature in the educational activity of the day is the desire on the part of all civilized nations to educate the whole people, and everywhere the question is asked, "In what way can we most widely diffuse the benefits of a thorough elementary education?" With this end in view improved methods of teaching are carefully examined in the light of modern experience. Even scientific tests are applied to the operations of the school-room, and by the aid of

psychology it is believed the science of education will soon take its place among the other sciences, with the principles on which it is founded just as well defined. But while it is in the province of the educator to study the laws of mental development, and the application of those principles by which the best results can be secured, it is the duty of the legislator to consider the various interests of the community for whose benefit these principles are to be applied. Any system of education which does not consider the social, and perhaps the religious organization of the people, their business life, their material resources, and their political wants, is necessarily defective. Out of deference to the religious differences of the people our school system is non-denominational. On any other basis it could not exist as a national system. It is the common property of every member of the State. Not that it is irreligious by any means; for it recognizes in the fullest degree the cosmopolitanism of Christianity without those denominational limitations by which, as society is constituted, its different families are now designated. Happily for us in Ontario, the unity of our system in this respect has been well sustained. Similarly our social organization has rendered us practically a homogeneous people. The distinctions which arise from the accumulation of wealth in the hands of the few, or, worse still, the distinctions which arise from what Tennyson calls "long descent," from fortuitous preferment and consequent assumption of superiority, do not appreciably interfere with the social equality of our people. It is easy, then, for us to establish a system which compromises no man's social position. To the rich man it is no reproach that his child sits on the same form with the child of his poorer neighbour. Nor does the poor man boast, that in securing the education of his children without cost he has obtained a socialistic victory over the rich. But when we come to consider a system of education adapted to the business life of a people, we are met with difficulties of no ordinary nature. What might suit a rural population, might not be as well adapted to an urban population, and so on through all the variations of trade and commerce. In seeking the solution of this problem for ourselves, there are certain considerations at least common to all systems of education. (1.) Education is not *knowledge*, but *power*. True, this power is to be acquired partly through knowledge, that is through the discipline which the acquisition of knowledge gives, but, after all, the real purpose of the educator is to generate power. The function of the furnace, if I may use such a word, is to generate the steam by which the engine is driven, but the furnace is not the *power* which drives the engines. It is not necessarily *what* the pupils learn, as *how* they learn, that determines the value of any department of knowledge as an educating force. The classics may be as good a means of mental discipline as the sciences—a passage from Burke's Reflections as a problem in commercial arithmetic—and yet, considering all the circumstances of the learner, the latter may be far more important from a practical standpoint than the former. The question then to be considered is, "How can we apply the educational forces which the various branches of knowledge contain in such a way as to generate the greatest power and secure the best results?" In other words, can we frame a curriculum of studies which is educating and at the same time useful? This is the question discussed by Prof. Elliot in his able address before the members of the Johns Hopkins University last February. After giving due credit to the classical course prescribed by all the Continental universities, he asks, is it not possible to find in the study of English literature as good an educating force and, at the same time, many more of those practical elements of culture which would be available for every-day life? Let me quote the eulogium which he pronounces on our much neglected literature:—

"It cannot be doubted that English literature is beyond all comparison the amplest, most various, and most splendid literature which the world has seen; and it is enough to say of the English language that it is the language of that literature. Greek literature compares with English literature as Homer compares with Shakespeare, that is, as infantile with adult civilization. It may further be said of the English language that it is the native tongue of nations which are pre-eminent in the world by force of character, enterprise, and wealth, and whose political and social institutions have a higher moral interest and greater promise than any which mankind has hitherto invented."

From this he argues—and who will say the contention is not a sound one—that English literature should occupy a higher place than it does in the liberal education of the English-speaking people. Let us now apply this principle of utility to the formation of the curriculum for our public schools. And first we would say—the useful should supersede the ornamental, and, secondly, the practical should supersede the theoretical. In discussing these two propositions it must be borne in mind that in an ordinary public school the teacher's time is divided among a great many classes. The amount of attention which he is capable of giving to each subject is necessarily very limited. The average rural school contains from 10 to 13 classes at least. How important is it then that no part of the teacher's time should be frittered away in idle embellishment to the neglect of the substantial and the necessary. It must also be remembered that the school term of the average scholar is very short. Only two per cent. of our pupils ever enter the Fifth Reader. It may fairly be presumed that the majority of the half million attending our public schools leave before reaching fifteen years of age. Are we doing them justice, or are we doing justice to those who bear the burdens of taxation, if we fail to consider this circumstance?

Then what are the requisites of a public school curriculum? (1.) Every pupil should be taught to read intelligently the literature of the day—not merely to *know the words*, but to understand their meaning, and to give to each word its proper force and vocal significance. (2.) To write neatly and legibly, in proper form, an ordinary business letter. (3.) To spell correctly, not, of course, all the words in the dictionary, but at least such words as are of common use in commercial circles and in every day conversation. (4.) To make such calculations in arithmetic, rapidly and accurately, as might be required in the daily business of the merchant, the farmer, or the artisan. (5.) To know the history of his own country minutely, and such general historical facts as may be said to have exercised a wide influence in shaping the destinies of other nations. (6.) To have such acknowledge of places as would localize his knowledge of the history, climate, productions, and races of other countries. (7.) To be so trained in the art of composition as to be able to express clearly, either on paper or orally, the knowledge he possesses. (8.) To be able to delineate pictorially what cannot be as well expressed in words.

Now it may be said that there is nothing new in such a curriculum—that it is now in force in all the public schools of the Province. I admit there is little that is new in outline. There is much, I think, involved that is new in detail. For instance, while in every school our pupils are taught to read, that is to name a certain number of words in the order in which they occur, how few are taught to read with expression and force. How few read with any appreciation of the author's sentiments—how few are able to express in their own words the sense of the author. Besides, the teacher utterly fails in doing his work properly while teaching his pupils how to read, if he fails to excite in them a love for reading. And it is here, perhaps more than anywhere else, that we must look for national results from public school education. It is not what the pupil gets in school that makes the course valuable to him, it is what it inspires. He may get here and there a few scraps of knowledge coupled with a somewhat rugged discipline, all useful in their way, but if to knowledge and discipline could be added the inspiration for further acquisitions—if like the first shilling earned by Astor, which made him a millionaire, his school work could be made the inclination to steady, plodding effort for more information; then, and only then, might we say that the teacher has done his work well. To teach a child how to read as I have indicated, is to give him the key-note not only to all the treasures of science, but to the literature described by Prof. Elliot as "The completest, most various, and most splendid the world has ever seen."

But reading is not only the key to literature, but also to history. By what species of national depreciation has it arisen that Canadian history is virtually excluded from our public schools? We study the history of Greece and Rome, of England and France, and yet we have failed so far to give a place even to the history of Canada on our examination papers. Apart altogether from the duty we owe to ourselves as a people, I think the study of history should occupy a higher place than it does in the school curriculum. As Prof. Elliot says:—

"If any study is liberal and liberalizing, it is the modern study of history—the study of the passions, opinions, beliefs, art, laws, and institutions of different races or communities, and of the joys, sufferings, conflicts, and achievements of mankind. Philology and polite literature arrogate the title of the 'humanities;' but what study can so justly claim that honorable title as the study which deals with the actual experience on this earth of social or progressive man? What kind of knowledge can be so useful to a legislator, administrator, publicist, philanthropist, or philosopher as a well-ordered knowledge of history? If the humanity or liberality of a study depends upon its power to enlarge the intellectual and moral interests of the student, quicken his sympathies, impel him to the side of truth and virtue, and make him loathe falsehood and vice, no study can be more humane or liberal than history. These being the just claims of history in general, the history of the community and nation to which we belong has a still more pressing claim upon our attention. That study shows the young the springs of public honor and dishonor; sets before them the national feelings, weaknesses, and sins; warns them against future dangers by exhibiting the losses and sufferings of the past; enshrines in their hearts the national heroes; and strengthens in them the precious love of country."

But it is not what this curriculum would include as much as what, rationally carried out, it would eliminate, I wish to consider. For instance, in the study of Arithmetic, how much pain would be spared the pupil, and how much useless anxiety the teacher, if only what is useful were taught. Of what use are alligation, circulating decimals, single and double position," and "duodecimals" to the ordinary citizen? It may be said that mental disciplines got in this way. So it may be got by a Chinese puzzle, but should Chinese puzzles be put upon the programme? Give your pupils discipline in doing a greater amount of work if you like, but let it be work that is of practical value. The man who trained his son to work by compelling him to wheel stones from one part

of the garden to the other would have acted much more wisely if he had ordered him to pluck up the weeds and otherwise improve the surroundings. As Swett in the *Pennsylvania School Journal* says:—

"A teacher who keeps young pupils at work, term after term, upon complex or puzzling problems in mental arithmetic, repeating long-drawn-out formulas in logical analysis, including statement, solution, and conclusion, before they have acquired readiness and accuracy in addition and multiplication, is only making them wheel stones. A country teacher who neglects 'the four rules' and 'the tables' in order to train big boys upon a normal-school analytical demonstration of the reason for inverting the divisor in divisions of fractions is wheeling stones; and if, added to this, he requires alligation, exchange, and progression, he is wheeling glacial boulders.

Now, all this superfluous, and in many cases useless, mental drudgery should cease, and the energies of teachers be directed to the task of imparting such a knowledge of numbers as would be of service in ordinary business pursuits.

In the same way the study of geography should be reformed. We cannot, of course, dispense with a good general knowledge of the world—the resources, climate, and productions of different countries, the important rivers, mountains, physical features, &c., but then why be so microscopic in our map geography? Who cares about the names of every little hamlet in France, every cape on the coast of China, or every island in the Mediterranean? Why burden the memory with bald names, which in a few weeks it repudiates, and which, if retained, would add but little to the mental equipment of the scholar? Why not be rational, and give the people in conjunction with the name of the place such facts of an historical or topographical character as furnish the only reasons why the name should be remembered? We certainly require to teach fewer names of places and more of the facts from which the places derive their importance.

Another consideration interwoven throughout this curriculum of essentials, or rather forming its substratum, should be the constant effort to quicken the mental activities of the pupil, to train him in habits of observation, to rouse his curiosity, to strengthen his judgment, and to cultivate his tact.

Having once entered the vestibule of the great temple of learning, he should have such an attractive view of its vast interior presented to him that he would gladly seize every opportunity to proceed farther, and, if fortune failed to favour him with the adventitious aid of an advanced teacher, he would, by his own unaided powers, explore every recess, and worship at every shrine which a refined intelligence had erected for the devotees of literature, science, and art. The next consideration in forming a Public School curriculum is simplicity. No greater mistake can be committed than to attempt too much. We must admit the child's power of absorption and assimilation is limited. The moment we exceed the range of that power all labour is wasted. Besides, the object of the Public School is not to teach many things, but to give the power and desire to learn many things. The first principles of a science may be easy and simple enough to an adult, but to a child they may be meaningless. Would it not be better then to exercise his powers within their natural range, than to perplex him with definitions, which to him are but a mere jargon of words? There is ample room within the area of essential subjects for the effort of which the child is susceptible, and to attempt more is to vitiate all. Let it not be supposed, however, that I object to such oral lessons in botany, natural history, and kindred subjects as appeal objectively to the child's mind. On the contrary, I value such lessons very highly. The boy learns largely from the world of nature around him. To aid him in his investigations, to stimulate his desire for more information, or to classify and systematise his knowledge would certainly be of great advantage to him. What I protest against is text-book science, or technical science for the school-room—a course of science entirely unscientific in its mode of presentation and utterly valueless as an educational force.

And this lead me to the next point—The Public Schools curriculum should be progressive. It should step by step keep pace with the increasing capacity of the pupil. Nothing is more irksome than to pore over lessons already mastered. Each day's work should be a new discovery, each lesson should be a fresh tableau. Just as fast as his powers develop so should heavier demands be made upon his energies. And here I might say that no absolute rule can be laid down as to the exact age at which certain studies should be undertaken. The judicious teacher must decide according to the capacity of each pupil, and no curriculum however wisely framed can render him much assistance. But progressiveness involves another idea. The Public School is part of a system, which so far as it goes ought to be complete in itself, but should also lead up to the next step in the great stairway of learning. Immediately above it is the High School, where work of a higher grade is done. And although we must not forget that we promote a greater number into active life than we do into the High School, still if the continuity of the system is to be preserved this step must not be overlooked. True, the pupil on this higher plane labors, perhaps, with a different object in view, but even there we should not lose sight of those practical subjects which, when rightly considered, are the most valuable educating forces that can be employed.

Lastly, a Public School curriculum necessarily includes the agency of a loving, thinking, intelligent teacher. Nowhere is the law of Biogenesis more fully vendicated than in the school-room.

Omne vivum ex vivo—no life without antecedent life. We may frame a curriculum as perfect in its mechanism as one of West's chronometers—we may equip our school-room till there is nothing more to be desired—we may lay down rules which for their wisdom would be commended by a Solomon, but if we cannot place in the school-house a teacher properly endowed the results will be disappointing. Whether we ask him whether the curriculum is simple or complex, progressive or retrogressive, unless the teacher understands his work it is all the same. From him and through him must first come that life germ which is to be the beginning of a new creation to the child. By him doubts are to be dispelled, difficulties removed, and the mental sky so illuminated that the world round the pupil can be read as in the light of day. Is there a beauty in literature, then he points it out. Are there sermons in stones? He preaches them. Books in the running brooks? He reads them Whatever of goodness and purity and inspiration there is in life, he imparts. Vitalizing with his own intellectual fervor every mind, he rouses dormant energies, encourages honest efforts, and stimulates into activity forces which leave their impress upon society when he has passed away.

A VOTE OF THANKS.

Mr. David Fotheringham moved, seconded by Mr. MacMurchy, that the Association express its high appreciation of the address, and tender a hearty vote of thanks to the President for having delivered it. This resolution was put by the Secretary and was carried amid loud applause.

The President acknowledged the vote in a few words. He expressed great gratification at the success which had attended this meeting. He had not known a meeting which was better attended or at which the discussions were more earnest and interesting. He explained that the next part of the programme would be the hearing of reports from delegates of the various county Associations. In the course of a brief discussion upon the work of these Associations, he stated that in New York there was a staff of twelve men who did little if anything else than visit the counties and instruct the teachers in the latest and most advanced thought in connection with education. In some of the other States the same work was done in different ways. He had hoped to have two men to place upon the road to visit the several Associations for this purpose. He did not desire to interfere with the work of the Associations, for he understood that these organizations must be allowed to do their own work. But by this system he hoped to assist the teachers in their work without clashing with the Association. Reports were then read from a number of the counties. Mr. D. G. Murphy spoke for West Middlesex, in which Association there were 120 teachers. His report showed a good state of affairs to exist. Mr. Sinclair, of East Lambton, representing 98 teachers, and Mr. Baird, West Huron, also reported. Mr. Powell, of Bruce, stated among other things that there was a lack of interest among the young teachers. His Association contained 80 teachers. Mr. Chadwick, of Perth, representing from 150 to 200 teachers, stated that the Perth Association had no membership fees. One of the main difficulties was the indifference of many of the teachers to the literature of the profession. He thought there should be some scheme for putting the SCHOOL JOURNAL into the hands of all the teachers. Mr. Payne, of Algoma, began the reading of his report, but as it was long, and had evidently been prepared with great care, the reading of it was postponed to a future occasion. Mr. Fotheringham reported for York that the Association, numbering 80 teachers in attendance, was in a flourishing condition. Mr. F. O. Steele spoke on behalf of the North Simcoe Association of 50 members, Mr. F. H. Smith for Wentworth with 115 members, Mr. McRae for the 40 members of the Waterloo Association, Mr. Henstridge for the Frontenac Association of 140 members, and Mr. Clapp for the North Wellington Association of 103 members.

The hearing of reports for other counties was postponed. Written reports will be handed in to the secretary by the several delegates.

[As we wish to give a full report of the Convention, we reserve the remainder till next issue.—*Editor.*]

If a father wishes to give his son a legacy that will endure while life exists, let him send him to an institution where he can obtain a practical education, and he will have the satisfaction of knowing that he has given him what is better than houses, lands, and farms, or even gold or silver. These things may take wings and suddenly fly away; but this knowledge will last while life and reason exist.—*Horace Mann.*

The teacher's work is principally directive, and he should avoid giving decisions with the air of authority, for the good to the pupils comes from the thoughts elicited, rather than from the conclusions stated.—*Johonnot.*

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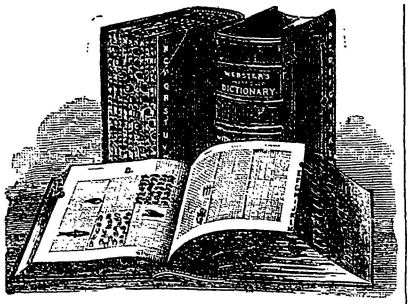
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Table of Contents.

EDITORIAL :— PAGE.
- The Spirit of the Teacher
- The English Educational Code
- The New Regulations for County Model Schools..
- The Normal Music Course ... 19
- Higher Education of Women ... 19
- The new School Programme for Teachers ... 19
- Institute Work for Next Year ... 196
- The Week y School Journal ... 197

MATHEMATICAL DEPARTMENT :—
- Prince of Wales College, P.E.I. ... 197
- Education Department, Ontario, July Examinations ... 198

CORRESPONDENCE ... 199

SPECIAL ARTICLES :—
- Graduate the Boys ... 200
- Secure Trained Teachers ... 201

EDUCATION DEPARTMENT :—
- Hints on Management ... 201
- Syllabus of Lectures and Regulations for the Organization and Management of County Model Schools ... 203

EXAMINATION QUESTIONS :—
- Lindsay Public Schools Promotion Examinations, June, 1884 ... 204

PRACTICAL DEPARTMENT :—
- The Importance of Method in Education ... 207

MISCELLANY :—
- A Cavalry Charge ... 209

NOTES AND NEWS :—
- Ontario ... 210
- Prince Edward Island ... 211
- Nova Scotia ... 211
- New Brunswick ... 212
- Bermuda ... 212

OFFICIAL DEPARTMENT ... 212
PUBLISHERS' DEPARTMENT ... 213
TEACHERS' ASSOCIATIONS ... 213
REVIEWS ... 216

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The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

THE SPIRIT OF THE TEACHER.

"Lay the young eagle in what nest you will,
The cry and swoop of eagles overhead
Vibrate prophetic in its kindred frame
And make it spread its wings
And poise itself for the eagle's flight."

—*George Eliott*

In the last analysis life is found to be something more than organization. In the daily work of the teacher, improved methods of instruction, skilful plans, and appropriate machinery may multiply power, increase effects and exalt influence. But all machinery is by itself mechanical and needs a soul of power behind it, a living spirit to move it, an immaterial essence transfused into it; otherwise, it is lifeless, dead, and can produce no spiritual result.

Life itself eludes the most delicate chemical tests, and the finest and best results of the true teacher cannot be estimated either quantitatively or qualitatively by the crude tests at our command. The white of an egg and the poison from the fang of a rattlesnake are chemically indistinguishable, yet one is wholesome food and the other is deadly poison. So also our educational tests must forever fail to measure the higher spiritual products of education, the influence of intellect on intellect, of soul on soul, of heart on heart. These can never be exhibited in tabulated results, nor their sum cast up in percentages. Yet they are all there for eternity, not the less valuable, not the less worthy of attention because we cannot precisely measure them with our rude instruments or estimate their weight in our educational balances. What we *can* weigh and measure is likely to occupy a disproportionate share of our thoughts and attention.

What is the soul of all our educational machinery? What is the great motive force that propels our system? What is the invisible power that resides behind courses of study and instruction and gives them organic potency? In short, what is the life and soul of effective teaching? It is

THE SPIRIT OF THE TEACHER.

And what is the spirit of the true teacher? We cannot define it any more than we can define the spirit of poetry or the perfume of a flower. It is the spirit of Socrates, who, by his spiritual midwifery helped to a birth the intellectual throes of his disciples. It is the spirit of Milton, who, amid his poverty and blindness, "saw with that inner eye which no calamity could darken," and labored diligently at his great work through all discouragements and without the least hope of earthly reward. It is the indomitable spirit of Wellington, who rode without a tremor through iron hail, and listened unblanched to the oft-repeated order, "Close up the ranks!" but wept as tenderly as a mother for her first-born as he walked over that terrible field in the calm moonlight. It is the spiri of Pestalozzi and Frœbel who delighted in little children and spent their whole lives in working out plans to promote their happiness. It is the spirit of Robert Raikes, Dr. Guthrie, and the poet Longfellow. It is the spirit of that GREATEST TEACHER who walked in Judea eighteen hundred years ago, took up little children, put his hands upon them and blessed them.

THE ENGLISH EDUCATIONAL CODE.

The English Education Department now deals with the instruction of very nearly five millions of children, and spends a Government grant of over three millions of pounds sterling. The general administration of the School Law is governed by a legal document called the Code, which is subject to modifications from year to year. Supplementary instructions are issued from time to time to inspectors and school managers to point out the proper interpretation and practical application of the Code. This series of official circulars has just been consolidated in a new circular letter from the Department, and English educationists are at present interested in comparing and discussing the numerous changes introduced. We select a few points from this rather formidable document, which will serve to give a glimpse of the tone and spirit in which the English school law is to be carried out.

Inspection is conducted by Senior Inspectors of *divisions*, each Senior having under him a considerable staff of Sub-Inspectors and assistants for seperate *districts*. These officers are warned against hurrying through their work, against keeping children under examination for an unnecessarily long time, and are plainly enjoined that infant schools should not be detained

beyond the ordinary hour of dismissal, and that the elder children should not be detained without some intermission for recreation.

In the system of payment by results on the basis of the Inspector's examination, the individual examination in the three R's is to be carried on as usual. But examination by sample is for the future to be the rule for (1) the work of infant classes, (2) needlework, (3) recitation, (4) singing, (5) mental arithmetic, (6) map-drawing, (7) class subjects in general. In selecting the sample class the Inspector will call out a set of children more or less arbitrarily chosen, and the teacher will then add two or three of his best scholars. Three-fourths of those examined must show that they have been well taught before the work is marked *good*.

In a general way the Inspectors are not to interfere with the details of the school time-table. They are, however, to draw the attention of managers to two or three points of grave importance when they find occasion, as (1) too little time allotted to a subject, for instance, for the amusing exercises which ought to form part of the daily routine of every infant class, (2) extra subjects must not be attempted if they cannot be efficiently taught in the ordinary school hours, (3) detention of scholars beyond the prescribed time, or any attempt to make up for neglect or for injudicious distribution of work by special exertions just before examination, must be promptly reported.

No notice is taken of the recent legal decision that home lessons cannot be enforced against the will of the parents. But the instructions state that home lessons are plainly unsuitable for delicate or very young children, and that owing to special circumstances home lessons in any form may be inexpedient in some schools. The inference is, the *Times* remarks, that no home tasks should be set in the lower classes except with the distinct sanction of the managers, and that in the upper classes not more than half-an-hour's work should be given, and it should be set, not to break up new ground, or call forth new mental effort, but simply to illustrate and impress the lessons already taught.

The direction discouraging corporal punishment is repeated. When resorted to it must be administered only by the head teacher, and a record of it entered in the log-book or school diary. This is an excellent rule which ought to be enforced everywhere. There are many other interesting points in this circular to which we cannot at present refer.

Inspectors sometimes have just cause to complain of want of promptness on the part of teachers or School Boards in forwarding half-yearly reports. If teachers desire to secure a prompt apportionment of the Government grant it is necessary to have the reports furnished at an early date, as the delay on the part of one teacher will delay the whole business.

Teachers should not blame Inspectors until they are satisfied that all reports have been correctly made out and forwarded to the Inspector.

Young teachers, tell your difficulties to the School Journal—the teachers' friend.

THE NEW REGULATIONS FOR COUNTY MODEL SCHOOLS.

The Minister of Education has issued in pamphlet form the regulations with reference to County Model Schools, which we purpose reprinting in the SCHOOL JOURNAL for the benefit of teachers. In glancing over these pages we see much to commend and some few things that are open to criticism. But it will probably be of more service to point out briefly matters needing improvement than to dwell on those which deserve nothing but praise.

First of all, the regulation of 1877 should be enforced which requires for each County Model School a Principal holding a First-class Provincial Certificate. This rule has been held in abeyance for seven years and should now be rigidly carried out in justice to those who have prepared themselves and passed for higher certificates.

The daily register first issued to these schools was a clumsy piece of old fashioned machinery. The new one has been improved and simplified a good deal, but still inflicts a certain amount of useless labor on the Principals, whose energy should be carefully economised for higher purposes than filling up complicated forms of report. In passing, we may remark that a few *words* serve the purpose much better than a long array of *figures* to give an accurate statement of a student's work.

In the next edition it would be well to distinguish more carefully between "observation" and "criticism". The "hints on observation" are, in fact, really points of criticism such as an examiner might require to notice in testing a candidate for a permanent provincial certificate. They are wholly out of place for the tyros who go to the class-room to observe good teaching with the intention of noting what it is and how it is done. Criticism is quite foreign to the purpose of such a visit, and should be strictly prohibited except by the Principal himself. If permitted it will place the student at a wrong stand-point, and effectually prevent that humble, patient, exact observation of all the facts before him which ought to be required at his hands. These young observers are not competent to pass judgment on the matter, method, plan, purpose, and style of a first-rate teaching lesson. If allowed to attempt it they will probably become only still more inflated with that pernicious self-conceit which is a measure of their self-ignorance, and ought to be emptied out of every teacher-in-training as speedily as circumstances will permit. These "hints" should direct the students *to observe* accurately the precise facts, and to give an exact account of all that takes place before them, including tone, gesture, expression, etc., the minutest details. It will be found on trial that not one in fifty can at first give a complete history of even a short lesson, still less describe the flavor and essence and individuality of the best teaching. It is early enough for criticism after the student has been taught to look patiently until he actually *sees* what he was sent to observe. To ensure this seeing the Principal should test thoroughly by sharp cross-examination the extent and accuracy of the observations made, and he should be very sparing in his criticisms of the work done by his assistants. If he has an assistant for his own class, and this

should be made imperative, he may observe most of the lessons along with his students, and thus be prepared to correct and supplement their imperfect observation.

The reports by the students of these observation lessons should be chiefly *oral* not written, as the Regulations seem to imply. The memoranda made in the class should be as brief as possible, for while the student is writing his attention is completely diverted from observation, and if his notes are elaborate he will not see more than half the facts of the lesson as it goes on. Full written reports may be assigned as home work, which would give useful practice in composition and enable the Principal to assist the young teachers in the acquisition of good and correct language, one of the most useful things the teacher can possess.

In the reports by assistants of the lessons taught by students, account should be taken of success as well as of failure. If nothing but faults are noted the students come by and by to experience a sort of chill which discourages the more sensitive and renders them unable to exhibit the teaching power they really have. The sunshine of sympathy is necessary above all to bring the flower of good teaching to perfection, and therefore the good points should be reported as carefully as the faults, of which, indeed, the student is often only too painfully conscious. We read:—"Assistant teachers should not be reticent in reporting criticism." This is well, but the words following, "particularly if the work has been badly done," ought to be struck out as calculated to leave a wrong impression. There are the watchful eyes of the Principal and the final examination to weed out incompetents, and assistants are more likely to criticise too harshly than to over-estimate undeveloped teaching power which may very likely soon eclipse their own.

The Regulations indicate that thirty lessons should be taught by each student in the various classes of the school. This is certainly an excessive number for so short a term as thirteen weeks, and some of the time could be better occupied. An hour and a quarter a day for seven of these short weeks is too ambitious, and should not be exacted from any but the very dullest students with little aptitude to teach. Not the number of lessons taught, but the number and sweep of the principles thoroughly wrought into the very fibre of the student's thinking will determine his success in the schoolroom. He will shortly get practice to his heart's content, meantime, a dozen lessons will test his power and reveal his weakness quite as well as thirty or a hundred. Some of this time might be utilized by the Principal in reviewing non-professional work and giving the candidates a *teacher's grasp* of the subjects they will require to handle, and a more thorough study of the best methods of presenting them. The first three Readers might be gone over in course so as to make sure that every candidate could pronounce every word correctly. It is well-known that many teachers mispronounce the words of the first book, such as *of, with, put, full*, etc., and thus propogate their own inaccuracies, while many such barbarisms as "four over five" for four-fifths or four by five, need a careful hand to eradicate. Much time should be devoted to such work and less to practice lessons. Our space will not admit of further remarks at present.

THE NORMAL MUSIC COURSE.

The First Reader furnishes sufficient for the subject of one notice. The book is so faulty that we are more than surprised it should ever have found a place on the authorized list. We are more surprised, however, to find that it is the only book authorized, and that in future, all the musical genius of the school-rooms in Ontario must receive its inspiration from this series. Such a state of affairs seems almost criminal.

If music is to be taught in the Schools of the Province—if it is desired that a love shall be created for the study of this important subject, the object can certinly never be secured by the use of a book such as that before us. We note a few of the points.

1. The whole of the subject matter of the selections was spun from one man's brain. Suppose the compiler of a school reading-book should sit down and try to fill it with his own composition, *written to order*, instead of culling the gems scattered through our English literature? There is a very large literature of children's songs by the best authors. The unavoidable sameness of this book will prove very tiresome.

2. The exercises, and especially the songs, are not very melodious in the ear of childhood, and they are non-educational in respect to the musical ear of the child from the fact that they wander too far from the natural harmonies. Every song, even in one part, has its harmonic foundation; and that supposed harmony, in order to produce the right effect upon the little learner, should be close to the main pillars of the keys.

3. The first reading lessons are written at too low a pitch for the voices of little children. If the key in which they are written is *not to be kept* in their practice it is falsehood to say that they are in that key. (See M. Tomlins in the June "Century Magazine" on Children's Voices.)

4. The early reading lessons are too stiff and mechanical; this sort of exercise is always fatiguing to little learners, and by their tendency to destroy the child's pleasure in singing, keep him from making the progress that might be made by the use of pleasant little song-forms as reading lessons. Their use would be analogous to pronouncing the words in a spelling column instead of those in a sprightly and well constructed sentence. It might be a trial of skill, but not particularly improving to the mind.

5. In the construction of these exercises the laws of musical form have been repeatedly violated. All German writers—and they lead the world in school music—are very careful in regard to this point.

6. The reading lessons have the numerals that point out the place of every note in the scale printed throughout, which takes away the necessity of pupils using their eyes to measure distance upon the staff, an act which lies at the foundation of all proficiency in music reading. To read music by this book the pupil would really have nothing to do with the notations except to observe the shapes of the notes indicating duration.

7. The preface puts forth the claim that the "true educational principle of instruction" as applied to music is the peculiar possession of the authors of this book. The contents of this book fail to justify this pretention. Aside from a few incidentals of instruction, borrowed from the Tonic-Sol-Fa system, the same principles have been applied to music teaching by all our best music teachers ever since Dr. Lowell Mason's day. The elementary music books of thirty years ago contained just as good reading exercises as this, and much better songs.

8. The preface also tells us that the words Tă, Tā, Tē and Tō name the value of sounds in length. As used in this book they do no such thing. Tă and Tē have exactly the same

length. They only name the place of a note in a measure, in the same way as the common counting of time does, which, for this purpose, is simpler and better, and in use by all musicians. The genuine French time-name system is quite a different thing.

9. There is a great multiplicity of exercises without any very apparent aim, and the difficulties, even when overcome, confer a kind of ability which is of much less value to a child than the true development of his musical sensibilities.

10. Mother Goose is all very well for home use, but it is not necessary to keep it before the children during three or four years of their school life. If the *music*, such as it is, of this book is new, the words of the songs are of the most hackneyed description.

11. To construct a good song-reader, that is, a book in which each step of progress is taken by means of a well-constructed little song, is a work of great labor and difficulty; but to bundle together fifty pages or so of exercises in all keys and all sorts of time, mostly without words, has been the make-shift of Cheap Jack singing book makers for years.

12. This book is excellent as it illustrates the advance in the art of paper-making, type-founding, engraving, printing, and book-binding.

HIGHER EDUCATION OF WOMEN.

The announcement is made that the Council of University College have decided to admit women to the ordinary lectures in that institution. This is the most signal triumph achieved by the workers in the cause since the doors of Cornell University were opened some years ago. University College is a state institution, and the applications of the women had in the long run to be dealt with as a matter of public policy. The Legislature having been appealed to, and having expressed a wish that women should be allowed to enjoy the privileges heretofore monopolized by the other sex, there was nothing for it but compliance on the part of the College authorities.

For the benefit of those women who would like a University education but are afraid to venture within university precincts we may state a few facts. In the first place the entrance examination is not difficult—very little more so than the High school intermediate. Then the course, after admission, is extremely flexible, the student being allowed a large number of options so that only one department is, in the case of those who take honors, required for graduation. Now that women are admitted to lectures, suitable accommodation will no doubt be provided, and the necessary supervision of the rooms set apart for female students.

It is to be hoped that women will in increasing numbers attend Toronto, Victoria, and Queen's University Colleges. They are allowed at present to teach in High Schools as assistants, but they cannot become head teachers without taking a degree in arts. There is no reason why they should be so restricted. In fact, several of them are now in their fourth year in Toronto University, and these will probably all take their degree of B.A. next spring, especially since they have been admitted to lectures.

Old teachers, let us hear from you. Write often. Write briefly.

THE NEW PROGRAMME FOR TEACHERS.

The revised programme of studies for teachers, which has just been distributed, presents a very marked contrast to that which it has superseded. Under the old regulations the High Schools (in which almost all our public school teachers are trained) were embarrassed by the undue latitude allowed to candidates in the way of options. The smaller schools in particular found it extremely difficult to arrange their work to advantage, as almost any time-table that could be framed left numbers of students unemployed. The new regulations abolish options altogether. A cast-iron course is laid down for both third and second class candidates, a bonus being added in the case of the latter for work done in music, or Latin, or French, or German. Whilst we believe the old scheme to have been faulty in its "multiplied options," we venture to think that the new one is not without some very objectionable features. Why, for instance, should a bonus be given, for extra work, to second class candidates and not to thirds also? And why refuse to girls the option of taking a more congenial subject in place of Algebra? This option we regard as one of the best features of the old programme, since, while it did not prevent any candidate with a mathematical leaning from taking Algebra, it allowed those to whom the subject was an insurmountable obstacle to develop a taste in other and, at least equally useful directions. We believe this particular option was found to work well everywhere, and we are sure its abolition will be generally regarded as retrograde in its tendency. Again, why is the subject of botany excluded even from the list of subjects for which a bonus is given? This subject has been rapidly growing in popularity in our High Schools. Its advantages as an educational instrument are exceptionally great, and it may be fairly said to fill a place in our school work for which no other subject is so well adapted. The new regulations must inevitably have the effect of undoing any good which may have been accomplished in this desirable field. It is a curious commentary upon the action of the department that, at the very time when the pursuit of this branch of science is being thus discouraged, the High School section of the Ontario Teachers' Association has recommended that Botany and Chemistry should form part of the work of the University matriculation examination. Some other points we reserve for another occasion.

INSTITUTE WORK FOR NEXT YEAR.

We confess to a feeling of disappointment on reading the circular issued by the Minister of Education regarding the Institute work to be done next year. We believe our disappointment will be shared by the great majority of inspectors and teachers in Ontario. We have the fullest confidence in Dr. McLellan's ability to do the work committed to him in a way that will be perfectly satisfactory to the profession, provided he be left free to do it in the way that he deems best. The universal opinion was that the "right man was in the right place," when he was appointed Director of Institutes. Every one expected his appointment to indicate an advance in the

professional training of the vast body of teachers already engaged in training. Too many seem to think that when their Normal School career is ended their training as teachers is finished. In reality it has only been commenced, even by the best Normal School training, and no national system of education can be regarded as complete which does not devote special attention to the continuous culture and training of the entire teaching profession under its jurisdiction.

We expected that, when a Director was appointed, the work of conventions would no longer be allowed to continue in the disconnected, irregular and indefinite way in which it was necessarily carried on without supervision or departmental guidance. We hoped that a brief and carefully selected course of professional reading, as well as a few good books in general literature would be prepared to be read by the teachers of the entire Province each year, and that these or certain parts of them would be taken as the basis of discussion for a portion of the time at the Institute meetings. At the very least we supposed that the subjects to be taken up by the departmental officer at the Institutes would be announced so that all teachers could prepare themselves for taking part intelligently in their discussion.

We are disappointed. None of our hopes have been realized. So far as we can learn from the Minister's circular, the Institute work of the coming year is to be no better, if it is to even be as good as formerly. Dr. McLellan is to attend one half of the conventions. This makes little change. He attended nearly as many before, by invitation of the Associations themselves. The change will be an improvement for Dr. McLellan who is now allowed a well earned release from his High School duties, but the Institutes will not receive much benefit from his appointment if he is merely to be placed on a level with the Inspector of Model Schools in the management of his own department. We do not believe that the country will approve of the course which the Minister of Education apparently intends to pursue, by using Dr. McLellan as an Inspector of Model Schools during a part of the year, and making Mr. Tilley his equal in Institute work. We are quite clear that the Associations to which Mr. Tilley is to be sent would not have invited him voluntarily.

In saying this we express no opinion regarding his fitness for his own work as Model School Inspector.

THE WEEKLY SCHOOL JOURNAL.

At the continued requests of numerous inspectors, teachers, and trustees throughout the Dominion, the publishers of the CANADA SCHOOL JOURNAL have decided to apply for a charter incorporating a joint stock company with a capital of $10,000 for the purpose of issuing the CANADA SCHOOL JOURNAL as a sixteen page weekly paper. It is the intention to divide the stock into 1,000 shares of $10 each. These shares will be offered to inspectors, teachers and educationists generally. In order, however, to insure as great a distribution of stock as possible, only a limited number of shares will be allotted to any one person. The new paper will be placed under the ablest management that can be secured, and nothing left undone to make the Weekly Canada School Journal a first-class educational paper, a credit to the teaching profession, and worthy of the support of all intelligent persons interested in the advancement of education.

The subscription price will be one dollar and fifty cents. Specimen copies will be issued about the close of the present year. In the meantime, parties wishing to purchase stock will be furnished with full particulars by applying to the Secretary, Mr. J. L. Robertson, No. 54 Front Street West, Toronto, Ont.

Mathematical Departme t.

PRINCE OF WALES COLLEGE, P. I ' LAND.

MATRICULATION AND SCHOLARSHI

ARITHMETIC.

THREE HOURS ALLOWED FOR EACH PAPER.

August 19th, 188½.

1. A bankrupt pays 25 cents in the dollar, and the total of his payments amounts to $8,000. What was his debt?

2. A. bequeaths his property in the following manner :—to B. $\frac{1}{3}$ of it, to C. $\frac{1}{4}$, to D. $\frac{1}{5}$, and to E. the remainder amounting to $2,600. What was the sum bequeathed?

3. Express as a decimal :—

$$\frac{3\frac{1}{2}+4\frac{1}{3}-(4\frac{1}{4}\div 3\frac{2}{5})}{3+\frac{1}{5+\frac{2}{7}}}$$

4. If the price of gold be 4 guineas an oz., what is the value of a gold ornament weighing 3 oz., of which 18 parts out of 24 are pure gold ; allowing 3 shillings and 4 pence per oz. for the value of alloy, and 25 per cent. upon the whole for expense of workmanship? Express the answer in dollars and cents.

5. A fast train leaves Charlottetown for Tignish, a distance of 120 miles at 2 o'clock, and travels at the rate of 25 miles per hour; at what time must a goods train which travels at the rate of 15 miles in 50 minutes, have left so as not to be overtaken by the fast train?

6. A. invests $\frac{1}{3}$ of his fortune in the five per cents at 95., and receives therefrom an annual dividend of $1,900. He invests the remainder of his fortune in the 6 per cents, and derives thence an income of $3,800. At what price was the latter stock purchased?

7. A. can do a piece of work in 25 days, B. can do it in 20 days, and C. in 24. The three work together for 2 days, and then A. and B. leave ; but C. continues, and after $8\frac{3}{5}$ days is rejoined by A. who brings D. along with him, and these three finish the remainder of the work in 3 days more. In what time would D. alone have done the whole work?

8. If 4 men and 18 boys working together, can do three times as much work per day, as 2 men and 4 boys together, compare the work of a boy with that of a man.

9. The prime cost of an 80 gall. cask of wine is $200. Five galls. are lost by leakage, and 35 galls. are sold at $3.50 per gallon. At what price per gallon ought the remainder to be sold, so as to gain 50 per cent. upon the whole original cost?

GEOMETRY AND ALGEBRA.

1. Prove that the sum of the three angles of any triangle is equal to two right angles ; and, thence, that the angles at the base of an isosceles right angled triangle are each equal to half a right angle.

2. If any angle and its supplement be bisected, the bisecting lines are at right angles to one another.

3. The secant which falls upon two parallel lines makes the alternate angles equal to one another.

4. If the square described upon one side of a triangle be equal to the sum of the squares upon the two other sides, the triangle is right angled.

5. Prove that if the straight line which bisects the vertical angle of a triangle, also bisects the base, the triangle is isosceles.

6. Simplify :—

$$2\left\{3a-2(b-3c)\right\}-4\left\{-2b-3(2c-a)\right\}+\left\{c-3(-b-2a)\right\}$$

7. Divide $1+2x-19x^6+16x^7$ by $1+4x+7x^2+10x^3+13x^4+16x^5$.

8. Divide $x^3-2ax^2+(a^2-ab-b^2)x+ab(a+b)$ by $x-(a+b)$.

9. Resolve into elementary factors :—
$5x(x^2-y^2)+3x(x-y)^2-12x(x-y)y$, and $12x^2-31xy+20y^2$.

10. Solve the following equations :—
(a) $a(x-b)=b(a-x)-(a+b)x$.
(b) $\frac{1}{2}x-\frac{1}{8}(8-x)-\frac{1}{4}(5+x)+\frac{1}{4}=0$.
(c) A man and his wife could drink a barrel of beer in 15 days. After drinking together for 6 days, the woman alone drank the remainder in 30 days. In what time would either alone drink it?

EDUCATION DEPARTMENT ONTARIO, JULY EXAMINATIONS, 1884.

ALGEBRA.

SECOND CLASS TEACHERS.

Examiner—J. C. Clashan.

1. Show that $(x+y+z)^5-x^5-(y+z)^5$ is exactly divisible by $x(y+z)(x+y+z)$.

2. Write down the factors of
$x^3-(a+b+c)x^2+(ab+bc+ca)x-abc$, and apply your result to obtain the factors of
(a) $(a+b+c)(ab+bc+ca)x-abc$;
(b) $2(a+b+c)^3+(a+b+c)\{a(b+c)+b(c+a)+c(a+b)\}-(a+b)(b+c)(c+a)$.

3. If $3x=2(q+r)-p$, $3y=2(r+p)-q$ and $3z=2(p+q)-r$ then shall $x^2+y^2+z^2=p^2+q^2+r^2$ and $xy+yz+zx=pq+qr+rp$.

4. If $\frac{ax}{b-c}=\frac{by}{c-a}=\frac{cz}{a-b}$ then shall $ax+by+cz=0$, and $a^2x+b^2y+c^2z=0$.

5. If $a=-\frac{1}{2}(1+\sqrt{-3})$ then shall $\frac{1}{a}=-\frac{1}{2}(1+\sqrt{-3})$, and $a^3+\frac{1}{a^3}=2$.

6. Solve—
(a) $\frac{4}{x-1}-\frac{1}{x-4}=\frac{9}{x-2}-\frac{6}{x-3}$;
(b) $\left(\frac{x}{a}+\frac{x}{b}-1\right)\left(\frac{x}{a}-\frac{x}{b}+1\right)+\left(\frac{x}{b}+\frac{x}{c}-1\right)\left(\frac{x}{b}-\frac{x}{c}+1\right)+\left(\frac{x}{c}+\frac{x}{a}-1\right)\left(\frac{x}{c}-\frac{x}{a}+1\right)=1$;
(c) $(2x^2-2x+1)^2=(x-2)^2$.

7. Solve the simultaneous equations—
$x^2-y^2=xy+1$, $x^2+y^2=2(xy+2)$.

8. A boy spends his money in oranges. Had he got five more for his money they would have averaged a cent each less, but had he got three less they would have averaged a cent each more. How much did he spend?

9. Find a number such that if it be divided into any two parts whatsoever, the square of one of these parts added to the other part will be equal to the square of the latter added to the former.

SOLUTIONS.—1. Put $x=0$, and we have $(y+z)^5-(y+z)^5=0$.
Put $y+z=0$, and we have $x^5-x^5=0$.
Put $x+y+z=0$, *i. e.*, $y+z=-x$,
and we get $0+(y+z)^5-(y+z)^5=0$.
$\therefore$ x, $y+z$, and $x+y+z$ are factors.—SEE TEACHERS' HANDBOOK, p. 48.

2. $(x-a)(x-b)(x-b)$.—SEE HANDBOOK, p. 10, 4, Bk.
(a) Comparing this with the given expression we see that x corresponds to $a+b+c$, and that the first two terms vanish when we substitute $a+b+c$ for x in the first expression. Hence $(a+b+c-a$, $(a+b+c)-b$, $(a+b+c)-c$, or $(b+c)(c+a)(a+b)$ are the factors.

(b) For $(a+b)(b+c)(c+a)$ substitute the expression in (a), and we get

$2(a+b+c)^3+2(a+b+c)(ab+bc+ca)-(a+b+c)(ab+bc+ca)+abc$,
or, $(a+b+c)^3+(a+b+c)(a+b+c)^2+(a+b+c)(ab+bc)+ca)+abc$.
Comparing this with $x^3+(a+b+c)x^2+(ab+bc+ca)x+abc=(x+a)(x+b)(x+c)$, we see that the factors must be
$(a+b+c)+a$, $(a+b+c)+b$, $(a+b+c)+c$
or, $(2a+b+c)(a+2b+c)(a+b+2c)$.

3. Adding we have $x+y+z=p+q+r$. (*A*)
Squaring (1), (2) and (3), and adding, we get
$x^2+y^2+z^2=p^2+q^2+r^2$ (*B*). Squaring (*A*) and comparing with (*B*) we have $xy+yz+zx=pq+qr+rp$.

4. $\frac{ax}{b-c}=\frac{by}{c-a}=\frac{cz}{a-b}=\frac{ax+by+cz}{0}$.
$\therefore$ $ax+by+cz=0$.—SEE HANDBOOK, p. 123.
Again $\frac{a^2x}{a(b-c)}=\frac{b^2y}{b(c-a)}=\frac{c^2z}{c(a-b)}=\frac{a^2x+b^2y+c^2z}{0}$.
$\therefore$ $a^2x+b^2y+c^2z=\{a^2x\div a(b-c)\}\times 0=0$.

5. Invert and rationalise, and $\frac{1}{a}=-\frac{1}{2}(1+\sqrt{-3})$
Adding, we have $a+\frac{1}{a}=-1$, cube by formula 6,
$\therefore$ $a^3+\frac{1}{a^3}+3(a)\left(\frac{1}{a}\right)(-1)=(-1)^3=-1$; $\therefore a^3+\frac{1}{a^3}=2$.
—SEE HANDBOOK, p. 11.

6. (a) Add each side separately, and
$(3x-15)\div(x^2-5x+4)=(3x-15)\div(x^2-5x+6)$,
$\therefore$ $3x-15=0$, or $x=5$, one solution.
Also $x^2-5x+4=x^2-5x+6$,
or $x-5+\frac{4}{x}=x-5+\frac{6}{x}$, *i. e.* $\frac{4}{x}=\frac{6}{x}$.
Now this can only be true when x is endlessly increased, so that $\frac{4}{x}=0$ $\frac{6}{x}$. Hence $x=\infty$ is the other solution.

(b) 1st product $=\left\{x\left(\frac{1}{a}+\frac{1}{b}\right)-1\right\}\left\{x\left(\frac{1}{a}+\frac{1}{b}\right)-1\right\}$
$=x^2\left(\frac{1}{a^2}-\frac{1}{b^2}\right)+\frac{2x}{7}-1$, Hence by symmetry,
2nd " $=x^2\left(\frac{1}{b^2}-\frac{1}{c^2}\right)+\frac{2x}{e}-1$
3rd " $=x^2\left(\frac{1}{c^2}-\frac{1}{a^2}\right)+\frac{2x}{a}-1$
Sum $=2x\left(\frac{1}{a}+\frac{1}{b}+\frac{1}{c}\right)-3=1$
$\therefore$ $x=2\div\left(\frac{1}{a}+\frac{1}{b}+\frac{1}{c}\right)=2abc\div(ab+bc+ca)$.
—See HANDBOOK, Chap. II., *Symmetry*.

(c) $2x^2-2x+1=x-2$, or $-x+2$.
$\therefore$ $2x^2-3x+3=0$; or $2x^2-x-1=0$ $\therefore x=$ &c.

7. From (2) $x-y=\pm 2$ $\therefore$ $x=y\pm 2$, $\therefore$ from (1)
$(y\pm 2)^2-y^2=(y\pm 2)y+1$;
or $y^2\pm 4y+4-y^2=y^2\pm 2y+1$, *i. e.* $y^2\mp 2y-3=0$
$y=\pm 3,\pm 1$, $x=\pm 5,\pm 3$.

8. Let $x=$ No. and $y=$ price each $\therefore$ $xy=$ amount spent,
and $(x+5)(y-1)=xy=(x-3)(y+1)$, $\therefore x=4$, $y=15$, $xy=60$c.

9. Let $x=$ No. and a and b the parts.
$\therefore$ $x=a+b$; and $a^2+b=b^2+a$, *i. e.* $a^2-b^2=a-b$;
or $(a+b)(a-b)=a-b$ $\therefore$ $a-b=0$, or $a=b$ one solution.
Also $a+b=1=x$, another solution. The first solution requires the parts to be equal and does not apply to the problem.—ANS. 1.

Teachers, read our special offer. The Journal will only cost you 25 cents for a year.

Correspondence

To the Editor of THE CANADA SCHOOL JOURNAL.

SIR,—Next to "less noise" and "stop that" by the irritated teacher, and "please ma'am, may I leave my seat," by the juvenile mortals, there is no cry so often heard, no complaint so pathetically uttered in the primary school as "I have no pencil," or an answer not unfrequently given to an inquiry made concerning that necessary article, "I ain't got none." How shall I remedy the evil, is the problem that vexes me. Has it been solved by elder members of the fraternity? If so, I trust some knowledge on the subject will be imparted through the columns of the JOURNAL—our mutual friend, who seems never weary of helping us.

It was the first cry that greeted my entrance to the profession, and a bright idea struck me, which I forthwith put into action. The next morning, as I entered my school domain, armed with a dozen slate pencils, "Surely," thought I, "these broken each into four pieces will begin a bank to which one can resort in case of an emergency." Accordingly, these with all that could be found in possession of the juveniles, were placed in an empty chalk box, and deposited on the teacher's desk, there to be kept when not in use. But in a remarkably short time *they all came back (?) missing*, and pencils were again in demand. Not foiled by this failure, my quick perception fell upon another plan. What I now proposed with the air of one who seeth not the end from the beginning, was that each pupil should come with a pencil, unmistakably his or her own, and have that attached to its respective slate by a string long enough to admit of use. This, I thought a capital idea. To add to my composure, my charges seemed pleased too with the new plan, and on the morrow, nearly every desk was supplied as I had suggested. The next morning, mute astonishment met me with the following facts :—

"No. one's pencil, slate and string were missing; No. two's pencil broken; No. three's string broken, and pencil gone; No. four's pencil missing, etc. 'Alas!' thought I, 'plans were made in vain.'"

I suggested no more ideas on the pencil question, and have since been laboring to make the best of a bad bargain. Pencils are still wanted, and I am still in a dilemma how to supply the need.

Another question that at first caused me anxious thought but with which I have had better success, is the "*Drinking Question.*" Not to teach children to drink *scientifically*, or *æsthetically*, but to quench their thirst at a proper time, and to suppress the desire "to go and do likewise," which is naturally prompted by the act of one.

I hope my letter is not wearying you, and I will show how I have made my plan serve a double purpose.

It would probably not be at all necessary, and perhaps not wise to adopt in a small-sized school. But take a primary department of 45 or 50, between the ages of five and twelve, and me thinks it would require one with more patience than Job, and more meekness than Moses, to even hear (to say nothing of satisfying) the cry, perhaps three times daily from each one, "Please may I have a drink?" "Have the pail carried around," advises one. This seems to me the worse evil of the two. It takes not only the time of the carrier, but that also of all those within a square of two yards of him. And that time of the teacher is better employed by watching the proceedings, for with her back turned, it affords an excellent opportunity for genuine fun, especially when the dipper leaks, as is, in fact, generally the case. I have step by step perfected my method, which is on this wise :—Allow no asking for a drink. At the close of each class, while it still stands, pass a drink to each one who has a perfect lesson, or one that is comparatively(?) so. In this way every person that deserves it, has, in a short time, had the privilege of drinking, and no confusion has thereby been occasioned.

ACADIAN SCHOOL MA'AM.

Orangeville, Ont., Sept. Ist, 1884.

Messrs. W. J. Gage & Co., Toronto, Ont.

DEAR SIRS,—I am studying algebra and have before me your 8th Canadian Copyright Edition, new revised, of Hamblin Smith's Elementary Algebra, and in Examples cxvii., Problem 20, Page 225 of this work I find

$$\frac{x}{x-7}\left\{\sqrt[18]{(3p^2x^3-63p^2x^2+441p^2x-1029p^2)}\right\}$$

given and on page 38 I find the answer to the same to be $x\sqrt[3]{(3p^2)}$. I can arrive at this answer only by substituting $\sqrt[3]{(3p^2x^3-63p^2x^2\&c)}$ for $\sqrt[18]{(3p^2x^3-63p^2x^2\&c.)}$ Thinking that this is an oversight on the part of the printer I have made bold to pen you this "epistle," hoping to do you a favor, and if I am in error I would be much pleased to be so informed, and hope to remain

Yours respectfully,
W. A. FERGUSON.

[NOTE.—The question should read $\frac{x}{x-7}\left\{\sqrt[8]{(3p^2x^3-\&c.)^6}\right\}$—. The exponent 6 has been broken off the stereotype plate. The answer is then correct.—*Mathematical Editor.*

THE NEW PROGRAMME.

To the Editor of THE CANADA SCHOOL JOURNAL.

SIR,—The new programme of studies for third and second class teachers will inevitably produce some serious changes in the general work of the High Schools. Every one acquainted with the schools knows that this programme shapes the work of all schools outside the larger cities. That being so, it follows as a matter of common sense :—

First, that no new programme, involving serious changes in classification should come into force in less than *two* years after its publication. To spring a new programme upon the schools at the beginning of the school year, and to demand that its provisions be carried out within the year is an outrage. What interest was suffering so seriously that this curriculum must needs come into force at once?

Second, that the experience of the past should afford some sort of guidance. Every teacher knows that the average girl is not as good a mathematician as the average boy. Why then insist on forcing girls through the same mathematical curriculum as boys are compelled to take? Some years ago when Algebra was compulsory on girls, fifty per cent. at least failed regularly on the mathematical group. Why bring back that disastrous state of affairs?

Third, that the interests of pupils who do not intend to take the teachers' examinations should be carefully looked after. Nearly every girl wishes to study French, a large proportion of the boys take Latin. The new programme makes so many things compulsory that it threatens to banish the languages from the schools. For the second class examination there are sixteen compulsory subjects. In most schools there are not more than eight divisions of time in the day. Assuming that the lessons of Monday, Wednesday and Friday are on the same subjects, and likewise those of Tuesday and Thursday, it will be seen at once how injuriously the interests of all who wish to study languages will be affected, especially in schools where the staff is small. The programme as it stands bears

on the face of it signs of a complete surrender to public school influences. Is it necessary to say that the High Schools are not intended primarily to train teachers?

Fourth, that the High School masters should be fully consulted before a new programme is issued. It is an act of folly, if not worse to keep the masters in the dark until the programme is finally issued. Why was not this curriculum placed before the High School section of the Ontario Teachers' Association? Their opinion is surely worth something. The Minister of Education professes to have great respect for the deliberately expressed conviction of the teachers. He has taken in the present case a most extraordinary means of showing it.

Fifth, that those who have entered upon a certain course in good faith should be permitted to finish it, without any serious change in their work. What justice is there in withholding the language bonus from those who intend to try the third class examination? Why should those girls who have taken up some subject instead of Algebra not be allowed to finish as they began? It is a piece of cruelty to keep them at school two years more for this reason alone. It is quite certain that many will fail to get up the Algebra within the time, who would pass well on the optional subject.

J. M. HUNTER.

Special Articles.

GRADUATE THE BOYS.

BY FRANK W. GOVE.

We speak, now, of the boys who are enrolled as regular pupils in the schools of Illinois, until they reach the grammar grade, and then part company with school forever. Whose fault is it, and how shall we remedy the evil? Though the teacher may not be responsible this wholesale desertion by the boys, it lies within his province to check the unfortunate stampede from school life,—unfortunate to the boys, because they are too young to realize their error, and unfortunate to the State, because the boys of to-day will rule the nation to-morrow. We shall not discuss the courses of study pursued throughout our schools at this time, for we think that the small per cent. of boys in the graduating classes is not caused by the particular line of work prescribed. In the main, the courses of study are what is needed, for no amount of "tinkering" so far as our observations go, has brought the millenium in attendance, that is so anxiously desired. There is an occasional cry for the practical, among those who think we ought to make the tradesman at the expense of mental training. But this class is in a small minority, and can never affect our schools to any great extent.

Poverty is often presented as an excuse for absence, but it is used to shield too many who might, with earnest effort and a due amount of grit, work their way through school to the glorious end. In some cases it is absolutely neccessary for the boy to leave the school room to support himself and mother but the fact is that he more often leaves school to engage in business that he thinks will bring him immediate return, and trusts to chance for the future. With no stock in trade but a beardless chin, he grasps for a fortune years before he can vote, and, too young to manage any business, drifts about the world. Perhaps he succeeds. Many boys do; what then? Enjoy himself in his ignorance! The world has no charms for him, save the acquisition of wealth, and he has no pleasure in life, except from without. He possesses no elements within his nature by which he has power to be happy, such as he might have met with a well trained and cultured mind. But perhaps he may not have prospered, and at the age of twenty-five he finds himself with no more than when he started, and worst of all, with only the first elements of an education. Too late, he has come to realize that an education alone is enduring. The majority of men do not disagree on this question, but boys are boys, and by the hundred they are falling out of the ranks of school every year, just for an experiment. Isn't it time that mature judgment should come to the rescue, and with the support of the educated men and women of this age, call a halt in these rash decisions of early youth, and insist on boys remaining in school long enough, at least, to complete the course of the public graded school? If this evil is checked at all, it must be accomplished by a united effort of teachers and parents. Strike at the root of the evil and boldly assert and maintain by argument the solid fact, that boys must be educated if they expect to keep apace with our fast progressing civilization. Examples of ideal Americans, whose lives are brought so prominently before our nation as to be familiar to us all, are not wanting. The fact that an occasional inventor, who had little school drill, has risen to the pinnacle of fame, is indeed poor incentive for a boy of twelve or fifteen years of age to leave his school work, one, two, or three years before he has completed his regular course. Fifty years ago, yes twenty-five years ago, no such advantages were afforded for school discipline as every boy now has, and if he hopes to compete with his associates, he should be taught *now* that his work must be done to the end. Just so sure as our American boys fail to prepare themselves for statesmen and scholars, just so sure will our laws be framed and executed by foreigners of higher educational ability and more thorough mental discipline. The boy who can make his mark without school drill is just the boy who ought to remain in school until the very last, equipping himself most generously for the active duties of life. America has great need of such men. But it is not a question what we think. The boy must be reached, and his action governed, or, at least, tempered by the influence of his seniors. In addition to the first principles of the common branches, he must be taught that hard work and persistent effort are the only means by which he can accomplish any work honorably; that a thorough mental training will alone fit him for the duties of man in the next generation or admit him to the best circles of society; that an American is not born great, but with full and untrammelled liberty to become so, if he will profit by his advantages; that *worth* not chance, makes the man, and last, that money is a means, not an end. The right sort of teachers, with their shoulders to the wheel, can soon persuade the boys of to-day, that aside from the inward satisfaction of a good common school education, the advantages are all in favor of securing it simply on financial grounds. And this must be done, for the boys seem determined to leave school and we can expect nothing better until they are persuaded that their judgment is in error.

The truth is that the boy who carries a diploma with him, certifying his honorable completion of the regular course in the public schools, bears also the evidence that he has pluck, perseverance, and ability,—especially is this true of a public school diploma which represents the honest effort of many years, and hence the importance to every boy of securing it. The time is already at hand when such boys are at a premium. The average boy of to-day brings no certificate with him, except that he lacks moral character and moral courage to remain in school the proper time, and upon this showing, seeks employment in the crowded avenues of trade. The signs of the times betoken a demand for more thorough men, and no man can be an expert specialist, until he has first mastered such a general education, at least, as is embraced in our public schools.

We remarked at the beginning that teachers, perhaps, were not at fault, but the people naturally look to the teachers to make

necessary reforms in school work, and upon the teachers this task will fall. If parents are not yet awake to the importance of educating the boys as well as the girls, wake them up, and we may yet see as many boys as girls graduated from our public schools—*Illinois School Journal.*

SECURE TRAINED TEACHERS.

BY HENRY WARD BEECHER.

What if a sailor at the end of a voyage untaught should say: "I cannot get another berth for six months, and I think I will practice medicine." You wouldn't put a dog in his hands unless it was for execution. What if a man should say: "I hope for an office and I will practice law until I get one." He never studied it, and isn't going to study it, but he is going to practice it. Who would put a piece of property or anything he had an interest in—who would put his business in the hands of a man that had not studied the law a good many years and gathered experience and accumulated wisdom which comes from study and experience?

You demand these for property, for the body; you demand experience in all these things, but for your children anything, only so that it is cheap! "If a man will teach for $25 a month and found, he is the man for us, unless there is a fellow who will teach for $20. So you foist off upon the children the poorest and the meanest and the most miserable teachers. Of all parsimony there is none like that of cheap schools. Endow the schools liberally and give them the best teachers that can be obtained.

Educational Department.

HINTS ON MANAGEMENT.

Reprinted from Syllabus of Lectures and regulations for the organization and management of County Model Schools.

First Section of Term—Two Weeks.

I. *Opening of School.*—In opening the Model School the Principal should explain to the teachers the organization and classification of the Public School with which it is connected; the necessity of observing carefully the methods of teaching practised by himself and assistants, the *points* on which they are marked in the Training Register, the importance of careful preparation for each day's work; the necessity of regularity and punctuality, with such other hints in regard to their deportment towards each other, towards the teachers on the staff, and the pupils with whom they come in contact, as may be considered requisite.

II. *Teaching by Principal.*—For the first two weeks of the session the Principal should teach, in the separate room provided for this purpose, those subjects which he intends the student teachers subsequently to begin with. This is preferable to an introductory course of lectures. In teaching a class as above, the Principal should first lay clearly before the students the plan of the lesson, and illustrate this plan by his method of teaching. He should also require them to take notes of his methods, and in the "criticism" hour these notes will furnish a basis for many practical hints. In this way—say ten lectures—combined with illustrative teaching, may be given on the best method of teaching reading, arithmetic, spelling, and Geography to a primary class. During this time the student teachers should not be required to visit the different departments of the Public School for *observation*, as no person can observe intelligently, or with profit, until he has first some idea of the object to be attained by the teacher.

III. *Teaching by Students.*—The student teachers having observed and taken notes of the Principal's methods of teaching, are now prepared for actual teaching, as well as for more extended observation elsewhere. It will be well, therefore, during the second two or three weeks of the session to employ them in teaching a class as above, in the separate room used for the purpose, the subjects previously taught in their presence by the Principal.

IV. *Observation.*—The Principal should next prepare the student teachers for taking observations in the different rooms set apart for training purposes. They should have learned at least by this time that no lesson can be well taught unless both the *matter* of the lesson and the *method* of presenting it to a class have been carefully considered.

The assistant teachers should explain, in presence of the student teachers, the purpose and plan of the lesson to be taught, before they begin to teach. Attention should also be called to *points* in the progress of the lesson, and the work should be summarized at the close. The student teachers should not be mere visitors in a room, but should observe *methods* of teaching and *discipline*. They must therefore be taught to observe intelligently.

The following hints on "observation" are suggested:—

1. Matter.

(1) Whether suitable to the class; proper amount for one lesson; whether exercising observation, conception, reason, or all of these?

(2) Lesson—whether bearing on one point; into what heads divided.

(3) Whether in a lesson involving a moral lesson, the proper applications are made.

2. Method.

(1) Whether the *purpose* of a lesson was properly outlined at the beginning.

(2) Whether the connection between the lesson and previous work was shown when possible.

(3) Whether the error of *telling* too much was guarded against,

(4) Whether good illustrations were used, specimens distributed, and diagrams drawn.

(5) Whether *appropriate* and *definite* questions were given.

(6) Whether the black-board was used, and new terms written upon it.

(7) Whether errors in answering were thoroughly corrected and special attention given to pupils who were backward.

(8) Whether pupils were allowed sufficient time to think.

(9) Whether the attention of all the class was secured or of only a *few forward pupils*.

(10) Whether the lesson was properly summarized.

3. The Class.

(1) Whether respectful, attentive, interested, and, if so, how secured.

(2) Whether pupils seemed weary, if so, why?

(3) Whether likely to carry away the lesson as a whole.

Each student should be required to enter his daily observations upon a sheet similar in form to that given below:—

Name of assistant teacher .....

Date.....

Subject of lesson .....

Notes by student teacher as follows:—

.....

.....

.....

.....

Signature of Student.

Teachers, let us hear from you. Make the Journal interesting by writing for it.

These "observations" should be submitted to the Principal for consideration during the "criticism hour," who will find ample material in the notes made, and in the discussion of the more theoretical part of the course, such as "management, discipline, organization," etc., to occupy all the time at his disposal.

Second Section of Term—Three Weeks.

Observation and Class Teaching.—During this section of the term one-half of each day should be spent by the students in the Mode School room :—

1. In observing class teaching by the Principal.

2. In class teaching before the Principal and their fellow students.

3. In criticisms. During the "criticism hour" the students should be required individually to read their notes with reasons, and all should be encouraged to express their opinions freely; the Principal directing the discussion and closing the criticisms.

During the second half of the day the students should be engaged in observing teaching in the different rooms and in taking notes. In order to secure uniformity and definiteness, the following form is recommended :—

Report of lesson on .....
Taught by .....
The faults most worthy of notice were :—
1. Your position .....
2. The plan of lesson .....
.....
3. Your management .....
.....
4. Your Language was.....
for instance .....
5. In energy you .....
6. Your mode of questioning was.....
for instance .....
Besides the above, other matters worthy of criticism should be reported.
Date..... *Assistant Teacher*.....

The assistant teacher should make entries on the *form* during the progress of the lesson, and at the close hand it to the student teacher, who should hold himself ready to be criticised on the points noted, by the Principal, whenever necessary. The marks assigned by the assistant teacher for the lesson should be given immediately after the lesson is concluded, and may be communicated to the student teacher, at the option of the Principal. All lessons should be assigned to the student teachers by the Principal, on consultation with the assistants in whose rooms the lessons are to be taught, and a record kept of each lesson in the Training Register, so as fairly to afford equal practice in every subject in the Public School curriculum.

Third Section of Term—Seven Weeks.

I. *Teaching by Students in the Divisions.*—The student teacher having already seen the Principal teach a number of subjects; having taught the subjects himself under the direction and criticism of the Principal; having *observed* how classes are taught by the assistant teachers; and having some idea of the "matter" and "method" of a lesson, should now be able to take charge of a class in the subjects already illustrated. As preliminary to this step, the lesson to be taught should be assigned the previous day, and thoroughly prepared. The assistant teacher, with whose class the student is entrusted, should leave him as much as possible to his own resources, and should take notes for subsequent entry in the Training Register. Assistant teachers should not be reticent in reporting criticism, particularly if the work has been badly done. The criticism should be *thorough, definite, just* and *kind.*

II. *Number of Lessons to be taught by Students.*—It is desirable that not less than thirty lessons shall be taught by each student. By the course suggested, at least seven weeks will be available for teaching in the different divisions. Taking twenty students as the average number in a Model School, and allowing one half-hour lesson per day to each student, we have ten hours per day for teaching by the student. Taking four divisions as the number used for Model School purposes, with a senior and junior section in each division, we have eight classes for ten hours of teaching, or an average of one hour and a quarter for each class during each day for seven weeks. When the number of students exceeds twenty, more than four divisions should be used if possible. The students should be properly distributed among the different rooms, and while one teaches, the others will observe and take notes. Lessons by students should not immediately follow each other. It is also strongly recommended that the students assigned to a division should remain a week in one room. By this means the corrections made by the assistant teachers will be more effective, the students and the pupils will become better acquainted, there will be less change, and consequently the regular work of the division will be less disturbed.

Fourth Section of Term—One Week.

Review and Examination.—Students should not be required to do any school work during this week, but should be allowed to review the work of the term.

Lecture I.

Characteristics of a Good Teacher.

I. *Mental Characteristics.*

1. Professional spirit.—2. Sympathy.—3. Tact.—4. Earnestness.—5. Energy (not demonstrative).—6. Enthusiasm.——Hopefulness.—8. Patience.—9. Watchfulness.—10. Definiteness.—11. Thoroughness.

II. *Characteristics of Manner.*

1. Quietness.—2. Cheerfulness.—3. Calmness.—4. Self-possession.—5. Uniformity of temper.—6. Politeness.—7. Kindness.

III. *Habits.*

1. Speaking in a low tone.—2. Orderliness.—Punctuality.—4. Cleanliness.—5. Neatness.

Lecture II.

Primary Reading.

I. There are two steps in learning to read well :—

(*a*) Word recognition.

(*b*) Expressive reading.

II. *Methods of teaching reading.*

1. Expressive reading can only be taught to junior pupils by giving them good examples for imitation. It should be taught to senior pupils by giving them proper rules for pausing, emphasis, inflection. etc.

2. Word recognition may be taught by either of the following methods :

(*a*) The alphabetic, or naming method.

(*b*) The word, or "Look and Say" method.

(*c*) The phonetic method.

(*d*) The phonic method.

3. The alphabetic method has been generally discarded, because in most cases the names of the letters in a word are in no sense suggestive of the sound of the word itself. The only plea urged for its use is that it teaches spelling, by compelling pupils to spell words

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With sufficient encouragement from our friends among the teachers we are ready to issue the Journal as a weekly. Help.

before naming them. It does this only to a limited extent, and in direct opposition to the recognized rule that spelling should be taught by reading, instead of trying to teach reading by spelling.

4. The phonetic method requires a new alphabet with a letter to represent each sound in the language, and is therefore impracticable with our present alphabet.

5. The word, or "look and say" method gives the name of the whole word to the pupils. The objections to its use are :—

(*a*) It depends too much on the memory.

(*b*) It does not make the pupils do independent work soon enough.

(*c*) The pupils can make very little, if any, use of knowledge already gained in acquiring more.

(*d*) It makes the pupil a receptive rather than a constructive agent.

(*e*) It does not compel such scrutinizing inspection of words as to lead to correct spelling.

6. If the English alphabet had but one sound for each letter and only one letter to represent each sound, the phonic method alone would be the best plan for teaching children to recognize new words. It gives the pupil the sound of the letters and trains him, first, to combine these sounds to form words ; and secondly, to recognize new words by sounding the letters which form them.

7. To avoid the mental confusion of children, teachers should use a perfectly self-consistent alphabet, with only one sound for each letter, during the first five or six weeks of a child's experience in learning to read. By using the short sounds only of the vowels a very large number of words may be formed.

8. The Phonic, combined with the word method, will be found to lead to the best results in teaching word-recognition.

III. *General Suggestions.*

1. Use slates and the black-board in teaching reading from the beginning.

2. Let the pupils write script from the first.

3. Only teach the sounds of letters as they are used. It is a great mistake to teach the alphabet as a whole, either by names or sounds, before putting these to a practical use.

3. Pupils should not be allowed to try to read a sentence until they know all the words it contains.

5. Simultaneous reading should only be allowed when the pupils are imitating the teacher, or when they are reciting something that has been committed to memory.

6. Bright pupils are certain to engross most of the teacher's attention so long as they are in the class. Dull pupils should get most teaching. In order to secure this result, when the new work of a lesson has been taught give review test words or sentences, and let those who read them first go to their seats and work there.

7. Backward pupils rely on those more advanced to lead them, and it is of the utmost importance that they should be compelled to make independent efforts. It is therefore very much better to let the pupils whisper the new words or sentences to the teacher after he has written them on the black-board.

8. Pupils should be required to do a great deal of word-building. The following are illustrations of an infinite variety of problems which may be assigned to them :—

(*a*) When they know the sounds of at, in, ing, on, etc., let them make as many new words as possible by prefixing letters to them.

(*b*) Give them two consonants, one for the beginning and the other for the end of a series of words, and let them form words by writing vowels between them.

(*c*) Give a single consonant, and let the pupils form as many words as they can, beginning or ending with it, and containing the number of letters fixed by the teacher.

(*d*) Write a certain number of letters on the black-board and let the pupils form as many words as possible by using only these letters.

(*e*) If the word method be used it is a good plan to sct the pupils to count at their seats how often certain words occur on a certain number of pages.

8. Lessons in reading to primary classes should be brief and lively. Two fifteen minute lessons are much better than one lasting half an hour.

10. Vary the method of conducting the lessons as much as possible.

11. In order to correct or prevent the habit of sounding "a" and "the" separate from the words following them, let the pupils first use them in speaking of some object held by the teacher. He holds up a book, for instance, and the pupils say correctly and naturally "a book," or "the book." They will do so without fail. Then these words should be written on the black-board, and repeated by the class, the teacher pointing alternately to the object and to the written words. It is also a good plan to join such words, as well as adjuncts, by bracketing them when they are written on the black-board.

SYLLABUS OF LECTURES AND REGULATIONS FOR THE ORGANIZATION AND MANAGEMENT OF COUNTY MODEL SCHOOLS.

Approved by the Lieutenant-Governor in Council, August 14th, 1884.

Lecture VI.

Spelling.

I. *How Spelling is Learned.*

1. Pupils learn to spell through the eye.

2. Correct spelling depends upon seeing with precision.

3. Spelling is learned through reading.

4. The ear may aid in spelling words spelled phonetically, but the eye alone is the best means of learning to spell. (Deaf mutes spell accurately.)

II. *How Spelling is Taught.*

1. As correct spelling depends on accurate seeing ; the great aim of the teacher should be to train the pupils to look definitely at all parts of the words.

2. Young pupils should copy largely from primers and from the blackboard.

3. Transcription is the best means for committing a spelling lesson to memory, as it compels the most careful scrutinizing examination of the words.

4. Pupils should never see words incorrectly spelled.

III. *Testing Spelling Classes.*

1. There are two methods, oral and written. (Although spelling has to be learned through the eye, a knowledge of spelling may be shown orally.)

2. As spelling has to be used practically by writing words, it is undoubtedly best to test spelling classes by making them write the lessons assigned.

3. Writing a word impresses its form much more than spelling it orally.

Next year we want to increase the subscribers to the Journal by over 2,000 subscribers, please help us by sending name of some friend, you will help to make a better Jonrnal.

IV. *Examining Spelling Lessons.*

1. In review lessons and in small classes the teachers should correct the lessons.

2. Pupils may exchange slates, and mark the words wrongly spelled, the teacher spelling the words slowly.

3. Pupils may retain their own slates, and the teacher may call on different pupils to spell the words orally. Those who agree with the spelling given must indicate this by raising their hands before the teacher decides as to its correctness.

4. Slates may be exchanged and the corrections made as in No. 3.

5. While the teacher writes the correct spelling on the blackboard, each pupil may correct his own work, and slates or books will then be exchanged for revision only.

NOTE.—In all cases when slates are exchanged the pupil owning the slate should have the right to appeal against the marking done by his neighbour.

V. *Correcting Errors.*

1. Each pupil should write the words he misses five times to impress their correct forms on his memory.

2. It is better that he should write these words once a day for five days than five times on the same day.

3. He should keep a list of his errors at the end of his dictation book, and copy it occasionally.

4. From these lists the teacher should prepare review lessons.

VI. *General Suggestions.*

1. The teacher should articulate clearly and pronounce correctly when giving words for spelling.

2. Only one trial should be allowed in oral spelling.

3. In oral spelling the divisions into syllables should be marked by a slight pause.

4. Spelling should be taught to a considerable extent by means of composition, in order to give pupils practice in spelling their own vocabularies.

LECTURE X.

History.

I. *Aim in Teaching History.*

1. To show the nature and value of historical knowledge.

2. To guide pupils in finding its treasures.

II. *Method of Teaching History.*

1. Topical better than chronological.

2. Classify events in connection with the great departments of national life, instead of associating them merely with the reigns of monarchs.

3. Topics: Dr. Arnold suggests, "race, language, institutions and religion." The history of most countries may be subdivided into (*a*) wars, civil and foreign; (*b*) the constitution; (*c*) the church; (*d*) progress of the people, commercially, socially, educationally; (*e*) literature; (*f*) notable people.

III. *Plan of Teaching History.*

1. In one lesson give a general sketch of the whole history to be taught, and divide it into its great development periods, fixing the date of the commencement of each period.

2. Teach the history of each period, beginning with the first.

3. Teach independently the events connected with each topic.

4. Sketch the history connected with each topic successively through all the periods, after having taught each period independently.

5. Show the advantages of this plan (*a*) in giving connected ideas regarding the progress made in each department of national life, (*b*) in facilitating the remembrance of historical facts in their relation to their effects; and (*c*) in affording natural and incidental reviews of the history already taught.

IV. *Training Pupils to Study History.*

1. This is the most important of the teacher's duties in dealing with this subject. History should be learned chiefly after school life has ended.

2. Assigning lessons wisely is the means for training to study.

3. Do not assign *answers* (notes) to be committed to memory.

4. Assign *questions*, and let pupils prepare answers by reading their histories.

5. All questions should not relate merely to isolated facts or dates.

6. They should compel a comparison of facts and exercise the pupils' judgment.

7. A good outline or plan of the lesson is better than questions for advanced classes.

V. *General Suggestions.*

1. Chronology is not history.

2. Epoch men and women should receive a large share of attention.

3. Striking scenes and great events should be vividly pictured to awaken interest.

4. Pupils should write historical abstracts and biographical sketches for compositions.

Examination Questions.

LINDSAY PUBLIC SCHOOLS.—PROMOTION EXAMINATIONS, JUNE 1884.

LITERATURE.

THIRD CLASS JUNIOR.

Readers may be used.

1.—Page 13, Lines 7 to 26.
(*a*) Explain: canals, autumn, solitary, lazy, perceived, herbage, perceptible, distinctly, injunction, ravine, regain, beach.
(*b*) Why could he not distinguish between the blue and the green?
(*c*) What was the father's injunction?

2.—Page 70-71, Canadian Boat Song.
(*a*) Give the meaning of:—tolls, chime, rapids, unfurl, surges.
(*b*) When would the woods look dim?
(*c*) What is the difference between "him" and "hymn"?
(*d*) Explain, "the daylight's past."
(*e*) Who was Thomas Moore?

GRAMMAR.

THIRD CLASS JUNIOR.

1.—Give the Part of Speech and relation of the words printed in italics: *The first forenoon* was *the longest I ever* spent.

2.—What is the difference between a Proper and a Common Noun?

3.—What is a Verb? a Pronoun? an Adverb?

4.—Correct: All the boys at school likes to play sometimes.
Is the boys playing right?
We ain't going to school to-morrow.
He don't know nothing.
Many men grows older but not better.

GEOGRAPHY.

THIRD CLASS JUNIOR.

1.—How could you tell the cardinal points in the day-time?

2.—Name all the townships of the County of Victoria.

3.—In what townships are Omemee, Woodville, Fenelon Falls, Bobcaygeon and Kinmount?

4.—Name the southern point of Europe, Asia, Africa, South America and Australia.

5.—What and where are Florida, Biscay, Orange, Hoang-ho, Bon.

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COMPOSITION.

THIRD CLASS JUNIOR.

1.—Tell what you know about any game you play.
2.—Make sentences each containing one of the following words: their, seen, were, Canadian, tob.
3.—Correct: the queen of england she lixes in london. Was you going there? John dont know his lessons. He aint here yet.

ARITHMETIC.

THIRD CLASS JUNIOR.

1.—Divide 24689753 by 987.
2.—Write in Roman Notation 49, 194, 1884.
3.—A lady having 312 dollars, paid for a bonnet 20 dollars, for a shawl 75 dollars, for a silk dress 97 dollars, and for a fur coat 83 dollars: how much had she remaining?
4.—Add together the following quantities: $729.43, $16.70, $976.81, $9987.17, $429.00 and $129.19.
5.—In 7 weeks, 6 days, 23 hours, 59 minutes, how many seconds?
6.—Multiply 74625983 by 9876.
7.—Write down in figures, seventy millions, sixty thousand, and fifty-five.
8.—Find the cost of the following goods:

3 lbs. of Tea	at 65	cents	per	lb.
4 " Raisins	at 12	"	"	
14 " Rice	at 5	"	"	
13 " Ham	at 16	"	"	

LITERATURE.

THIRD CLASS INTERMEDIATE.

Readers may be used.

1.—Page 165.
(*a*) What is meant by:—firmament, spacious, ethereal, unwearied. publishes, shades, utter.
(*b*) Why is "Creation" written with a capital C?
(*c*) Explain 1 "Their great Original."
2 "spangled heaven."
3 "the evening shades."
2.—Page 121, Lines 13-26. (*a*) Give meaning of "elation," "glided," "adopt," "tiptoe, intelligence."
(*b*) Who were the strangers?

GRAMMAR.

THIRD CLASS INTERMEDIATE.

1.—Divide into subject and predicate;
A lion cub, of vulgar mind,
Avoided all the lion kind.
2.—Parse; And now the lizard began dragging the body of the spider across the grass.
3.—Name the ways in which nouns form their plural
4.—Compare: white, grey, sunny, honorable, sad.
5.—Divide into syllables, mark accented syllable, and write out the silent letters in: miraculous, shouldering, desperately, slaughtered, miniature.
6.—Correct: The prince of wales was very sick in london, but recovered on tuesday the seventh of july.
Geography or history are pleasant to study.
Neither Henry or Mary study very long.

GEOGRAPHY.

THIRD CLASS INTERMEDIATE.

1.—Draw a map showing the counties on Lakes Erie and Huron, and their county towns.
2.—Define archipelago, tributary, peninsula, gulf, sound.
3.—Locate the cities of Ontario.
4.—Name in order the rivers flowing into Lakes Huron and Ontario.
5.—Locate Adriatic, Aral, Belle Isle, Cattegat, Dardanelles, Euphrates. Everest, Java, Matapan, Nile.

COMPOSITION.

THIRD CLASS INTERMEDIATE.

1.—Write a note inviting a friend to dine with you.
2.—Write sentences containing: relative, at a venture, muzzle, muscle.
3.—Change the following sentences to the interrogative: John went to the woods. The ground squirrel is quite numerous now. I threw him back with some violence.
4.—Correct: Yesterday was wensday the forth of febuary. Is there any boys here? Many trees was cut down.

ARITHMETIC.

THIRD CLASS INTERMEDIATE.

1.—Multiply 749 lbs., 10 oz., avoirdupois, by 72.
2.—Reduce 179 lbs., 3 oz., 3 dr., 1 scr., 14 grs., to grains.
3.—Reduce 74002702 square inches to acres, roods, &c.
4.—How many times will a carriage wheel turn in going from Toronto to Hamilton, a distance of 38 miles, the circumference of the wheel being 14 ft., 11 inches?
5.—Find the cost of 73429 lbs, of oats at 30 cents a bushel.
6.—Multiply 123 bus., 1 pk., 1 gal., 1 qt., 1 pt., by 640.
7.—Divide 422 miles, 4 fur., 38 rods, by 37
8.—Find the cost of

17 yards Cloth	at $1.40	a	yard.	
18 "	"	1.75	"	
19 "	"	2.20	"	
20 "	"	1.65	"	

LITERATURE.

FOURTH CLASS JUNIOR.

Readers may be used.

1.—Page 37, Stanzas 1, 2, 3, 4, 5, 6.
(*a*) Give meaning of:—fleet of ice; corsair; blast; glistened; pennons; crystal; seaward he bore; leaden shadows; streamlets; main.
(*b*) Explain:—"The east wind was his breath;" "Should Sir Humphrey see the light."
(*c*) Why have "Death" and "Book" capital letters?
(*d*) Where is Campobello? Why was Sir H. Gilbert?
(*e*) Write what you know about Longfellow.
2.—Page 69, Lines 17 to 41 inclusive.
(*a*) Explain:—shrubby, pendulous, tortuous, prominent, tendril, drachm, scruple.
3.—Distinguish between:—color and collar, hold and old, minute and min'ute, prepare and per pair, mangled and mangold.

GRAMMAR.

FOURTH CLASS JUNIOR.

1.—(*a*) Analyze: "Our friend, the traveller, gave a sixpence for the little plant which he had brought up from the time of his first receiving it."
(*b*) Parse: our, friend, traveller, gave, which, had, brought, from, receiving, it.
2.—Name four classes of adjectives not compared, and give examples of each.
3.—Put "a" or "an" before, hour, honest, honorable, humming, hotel, history, horse, historical, holy, hemisphere.
4.—Write the past tense and past particle of throw, forsake, strive, stride, write, see, fly, slay.
5.—Write the 1st person, singular, present perfect tense, passive voice of know, ride, smite, take.
6.—Correct and give reasons:—
(*a*) I will be drowned and nobody shall save me.
(*b*) It is more than a year since I have regularly went to school.
(*c*) It was him that I saw chasing the cow.
(*d*) Them is the kind of apples I like.
(*e*) George is the tallest of the two boys.

GEOGRAPHY.

FOURTH CLASS JUNIOR.

1.—Name the Provinces of Canada and locate the capitals.
2.—Name the most important productions of British Columbia and Nova Scotia.
3.—In a coasting voyage from Quebec to Halifax through what waters would you sail; and what islands and capes would you pass?
4.—Define watershed, delta, arctic-circle, tide.
5.—Locate Amherstburgh, Calais, Elba, Elbe, Hungary, Odessa, Palermo, Rhine, Timbuctoo, Weser.

6.—Draw a map of the Midland Railway showing Belleville, Blackwater, Coboconk, Haliburton, Lakefield, Lindsay, Lorneville, Manilla, Madoc, Midland, Millbrook, North Hastings, Omemee, Orillia, Peterborough, Port Hope, Stouffville, Toronto, Whitby.

HISTORY.

FOURTH CLASS JUNIOR.

1.—Write notes on any four of the following: Bede, Canute, (Cnut), Grecy, Montfort, Joan of Arc.
2.—In whose reign was the title of Prince of Wales created, and under what circumstances?
3.—How came Henry II to be king of England?
4.—Name the sovereigns of England from Henry III to Henry VI, give date of accession, and relation of each to his predecessor.
5.—What English sovereigns tried to conquer France? What reason did each give for so doing? How did each succeed.

COMPOSITION.

FOURTH CLASS JUNIOR.

1.—Change into complex sentences:
(*a*) The country was covered with snow, and he could not find his way.
(*b*) The little boy hurt his finger and went home.
2.—Write out in proper form a note for $10 due in 30 days from date.
3.—Correct: (*a*) John dont write bad
(*b*) I hate those kind of people.
(*c*) The dinner smells pleasantly.
(*d*) What sort of a time had you?
(*e*) I dont feel like going for a walk.
(*f*) You become that hat well.
4.—Write a letter to a friend asking him to visit you during the Central Exhibition.

ARITHMETIC.

FOURTH CLASS JUNIOR.

1.—Bought 96 acres, 3 roods, 17 perches of land, for which I pay $7764; what did I pay for it per perch?
2.—Divide £1694, 16s. 1½d, by £9, 19s. 11¼d.
3.—Divide 123.4 by ·000000066.
4.—What is the least common multiple of 8, 10, 18, 27, 36, 44 and 396?
5.—Find the value of ·1234625 of 2 weeks and 2 days.
6.—A room is 34 ft. long, and 21 ft wide. Find the cost of carpet 27 inches wide at $1.75 a yard.
7.—A pile of wood is 70 ft long, 4 ft. wide, and 5 ft. 4 inches high. Find the cost at $2.75 a cord.
8.—Find the cost of

96	lbs. of	Butter	at 20½	cents	per lb.
40½	"	Ham	at 17½	"	"
36¼	"	Lard	at 15½	"	"
23½	"	Cheese	at 12¼	"	"

LITERATURE.

THIRD CLASS SENIOR.

Readers may be used.

1.—Page 238, Soldier's Dream.
(*a*) Write the meaning of——truce, lower'd, reposing, pallet, thrice, desolate, autumn, traversed, oft, aloft.
(*b*) Explain, "sentinel-stars."
"our bugles sang truce."
"wolf-scaring fagot."
"in life's morning march."
"the sweet strain."
2.—Write what you know about Campbell.

GRAMMAR.

THIRD CLASS INTERMEDIATE.

1.—Divide into subject and predicate:
A lion cub, of vulgar mind,
Avoided all the lion kind.
2.—Parse: And now the lizard began dragging the body of the spider across the grass.
3.—Name the ways in which nouns form their plural.
4.—Compare: white, grey, sunny, honorable. sad.
5.—Divide into syllables, mark accented syllable, and write out the silent letters in: miraculous. shouldering, desperately, slaughtered, miniature.
6.—Correct: The prince of wales was very sick in london, but recovered on tuesday the seventh of july.
Geography or history are pleasant to study.
Neither Henry or Mary study very long.

GEOGRAPHY.

THIRD CLASS SENIOR.

1.—Draw a map of the County of Victoria, showing all the Townships, Railways, Lakes and Rivers.
2.—Define equator, river, lake, isthmus and shore.
3.—Give the boundaries of New Brunswick.
4.—Name the rivers of Quebec flowing into the St. Lawrence, and a town at the mouth of each.
5.—What and where are Bab-el-mandeb, Ceylon, Congo, Finland, Lena, Marmora, Naze, Okhotsk, Sardinia, Tonquin?
6.—What rivers drain the following lakes: Champlain, Geneva, Scugog, St. John, Winnipeg?

HISTORY.

THIRD CLASS SENIOR.

1.—Why do we keep July 1st as a holiday?
2.—When was the battle of Queenston Heights fought? Who were the parties fighting, and who were the leaders? What were the results? In what war did it occur, and what was the cause of that war?
3.—From whom did the English obtain Canada? How? And when?
4.—Name some Indian chief who tried to win Canada from the English.
5.—When was Canada discovered, and by whom?

COMPOSITION.

THIRD CLASS SENIOR.

1.—Write a description of "The Cow."
2.—Write out in proper form a receipt for rent, $96.50, paid to-day.
3.—Combine into one sentence:
Their hair is matted.
Their hair is stiffened.
It is stiffened with the fat of swine.
It is stiffened with the fat of other animals.
The fat is mixed with powders.
The powder are of various colors.
4.—Write sentences containing:
(*a*) that he come so late.
(*b*) where he intended to make a home.

ARITHMETIC.

THIRD CLASS SENIOR.

1.—Reduce 7964327 square inches to acres, roods, etc.
2.—Multiply 6 weeks, 4 days, 3 hours, 17 minutes by 429.
3.—I bought four fields; in the first there were 6 acres, 3 roods, 12 perches; in the second 7 acres, 2 roods; in the third, 9 acres and 13 perches; in the fourth, 5 acres, 2 roods, 36 perches. How much in all?
4.—A silversmith made 3 doz. spoons, weighing 5 lbs., 9 oz., 8 dwt.; a tea-pot weighing 3 lbs., 2 oz., 16 dwt., 16 grs.; two pair of candle-sticks weighing 4 lbs., 6 oz., 17 dwt.; a dozen silver forks weighing 1 lb., 8 oz., 19 dwt., 22 grs. What was the weight of all the articles?
5.—Multiply 47 miles, 6 fur., 17 rods, 4 yds., 2 ft 7 in. by 576.
5.—Reduce 72 miles, 3 fur., 7 rods, 2 yds., 1 ft. 7 in., to inches.
7.—From May 17th, at 9 a. m., to September 19th, at 3 p. m., how many hours?
8.—Find the cost of

17	pairs	Boots	at $3.75	per pair.
19	"	"	2.65	"
21	"	"	4.10	"
23	"	"	2.85	"

Any teacher sending us the name of a new subscriber and $1.25 can have the School Journal for a year and a copy of Ayre's Verbalist (price of Verbalist is $1.00.)

Practical Department.

*THE IMPORTANCE OF METHOD IN EDUCATION.

It will depend upon the use of the means or the method employed by the teacher whether or not he can accomplish the work expected of him. There are two ways by which knowledge is gained, one is finding the knowledge ready made, the other is through the exertion of the mind itself. The method will determine two things—the character and amount of knowledge, and the character of the training acquired in coming into possession of the knowledge. Proper mental training always brings two results—a consciousness of increased power and at the same time a consciousness of the possession of new knowledge. The ready made knowledge may be got from a book or be given to us by another. Whether the knowledge will be of any real value to us will depend upon the mind's action in connection with it. If the mind put forth no act the knowledge cannot be taken in—it is left out in the cold, to use a common expression—it does not grow, it has no root, it withers away. It is this kind of knowledge that can never be found when wanted, or if perchance it may have reached that part of the brain called by physiologists sensorium, which has the power of reproducing its impressions just as a parrot can, it can be reproduced at a given signal. The fact, or rule, or whatever it may be, is glibly repeated and passes for knowledge, but the pupil can apply it to nothing except to some particular case with which it was previously associated. When some one else than his teacher questions him, he does not understand, does not know what is meant—the signal is not the same. He often hazards an answer which may be a correct one to another question but absurd to the one proposed, and as ludicrous as the scene which has been described between Frederick William the Great and a tall French grenadier who knew only three words of German. He was instructed to reply to the king's three general questions on parade, "How old are you?" "Three and twenty." "How long have you been in my service?" Three years. "Are you satisfied with your rations and lodgings?" "Both your Majesty. "The King, however, took the very unusual course of inverting the first two questions and the grenadier of course made himself three years old and twenty-three years in his majesty's service. The king, amazed at such answers, did not put the other question about the rations, but the inquiry, "Are you a fool or am I?" "Both your Majesty." Such is often the character of the knowledge we get ready-made, and the application we make of it. No doubt examples as ludicrous have been witnessed by some of yourselves. Let me give you one or two, not for the purpose of making sport, but of illustrating the character of knowledge got ready made without bringing the mind to bear upon it. "What is the Equator?" was a question asked a class in geography not very long ago. "A line perpendicular to itself and called the meridian." In another class the following questions were asked: "What is the difference between the noun 'book' and the book itself?" "What is an abstract noun?" "A collective noun?" To which the following answers were given: "There is no difference." "An abstract noun has no particular calling." "A collective noun is what it wants to make it more complete." In another class the following answers were given to the questions: "What is the circumference?" "Distance round the middle of the outside." "Distance through the middle." "What is the meaning of develop?" "To swallow up." "Give an example." "God sent a whale to develop Jonah." I do not say there are many such cases, I hope there are not, but the existence of any show that knowledge, however accurately it may be given, may be reproduced in a most absurd form, unless the mind is called into exercise. It must not, however, be assumed that when the knowledge is accurately reproduced it is therefore understood by the pupil or of service to him. A long series of questions may be answered correctly and not one of them be understood. The verbal memory of children is very powerful. They can readily remember sounds without attaching any idea of them, and can readily reproduce them.

The teacher has, therefore, frequently to adopt the other method of securing knowledge, viz.: through mental exertion. He has to train the pupil to do things for himself, to get his own ideas from things. A physical, mental, or moral act can be done only by performing it. Every one has to do those things which he would acquire the power of doing. You know yourselves that you could never acquire the power of readily solving arithmetical problems without performing the operations yourselves, nor acquire a dexterous movement of hand without performing the acts through which the power is acquired. Now look how nature does. She gives the child no laws, no rules, no principles, no formulas. She simply gives the material, the faculty, and the occasion for its exercise. There is much repetition in her teaching, in order that the difficult may become easy and use become second nature. She does not tell the child but prompts him to action and induces him to think what he is doing. She does not explain to him the difference between hard and soft, or between a hot stove and a cold one, but says, "feel them." Lay your facts, she says, side by side and compare them, find out where they are alike and unlike. Her business is the training of faculty and the development of power.

These two methods of acquiring knowledge may both be successful as respects the knowledge, but their effects upon the mind are very different. When the mind's activity consists in merely comprehending the thoughts of others, the truths which have been discovered and explained, it becomes a receptacle, a working one, it is true, working the nourishment into its own substance, but preparing it only for taking in more and making progress. The method which presents the material to the pupil for observation and reflection, and simply stimulates and directs the mind to an orderly plan of study, trains him to form his own ideas of things, to put forth his own efforts in the acquisition of knowledge. I do not mean to put the one method against the other, for both are necessary in our schools; pupils must have lessons assigned to learn from books, when they are sufficiently advanced to master them, but I do say that the one method is too generally followed to the exclusion of the other. The teacher in many instances becomes a mere hearer of lessons instead of a trainer.

There is a constantly increasing demand for results of greater commercial value from our school system; and the school must consider the question. If our boys had training in the elements that are common to all industrial pursuits and our girls training in the principles of domestic economy, all reasonable demands would be met without disturbing the primary aim of the school or increasing the number of subjects in the course.

Such training should embrace industrial knowledge and manual dexterity. Industrial knowledge consists in an acquaintance with industrial materials and processes Industrial materials are of course the various materials used in the industries, consisting of substances from the mineral, vegetable or animal kingdom. Industrial processes are those operations by which raw materials are converted into forms for our use.

You have seen that we have in the course the subjects that form the elements of industrial knowledge. Instruction is required in

* Abridged from the opening address of Principal Crocket of the Provincial Normal School, Fredericton, N. B.

minerals, plants and animals, and their uses. With respect to the processes, a large number relating to the most useful industries are described in our Readers, and these lessons are required to be supplemented by oral instruction. Industrial drawing, the subject of Form and of Geometry, so far as taught, all bear directly upon many industries.

That they shall result in industrial gain will depend upon the mode of teaching them. Let me give you a few practical hints in the form of some examples.

The subject of Form, which is taught in the first two grades, may be made mainly constructive. During the first year, after the pupil has gained perceptions of the various forms brought under his notice, proceed to construct them of such suitable material as can be conveniently had. The ball, cube, cone and cylinder may be formed of clean moist or moulding sand, or suitable clay. They should be made as accurately as a child can be taught to make them, and considerable pains should be taken to give him the necessary facility of manual movement. During the second year the material should be of a more resisting nature than sand, perhaps pasteboard. As a sample of an exercise, suppose he is required to construct a square whose side is three inches, or any convenient length. Require him to place his ruler upon the piece of pasteboard and mark with his knife along the outer edge. This operation is not so easily done as one might suppose. The ruler has to be correctly applied and firmly held with the left hand, so that it cannot slip and produce a crooked line instead of a straight one. He should also be required to do it with the least amount of waste. He will have to be shown, in the first instance, how to move the ruler as far as possible towards the edge, so that none but the waste parts may be marked off. When this is done he proceeds to cut. His first attempts will be awkward and the line will be imperfectly cut; it will be ragged and probably uneven. He will require to be shown how to steady the pasteboard and how to hold the knife when he cuts. Let him test the accuracy by applying his ruler to the cut. Let it be done again and again, if necessary, but not so often as to discourage him. Let us suppose one side completed.

The second adjacent side is ruled off and completed in the same way. Let him now apply the carpenter's square to test the work (small carpenter's squares can be had for the purpose). He wil not only learn the use of this tool, but he will become practically acquainted with a right angle, and his eye will soon detect the slightest deviation from it. The two remaining sides will be constructed in a similar manner and the square completed. There will, no doubt, be many trials and repeated corrections before a fairly accurate square has been made, but the pupil has made substantial gain. He has learned to use a ruler and knife properly, and acquired some manual neatness and dexterity. Exercises may be proposed on the square, by means of which its geometrical properties may be practically understood. They may be further led to find out that the diagonals of a square are not only equal to each other, but bisect each other—truths which they will never forget when taught in this way. If each form is similarly dealt with, the drawings which the pupil makes in his subsequent course will be not only much better executed, but of far deeper interest.

When he has entered upon his course in industrial drawing, the pupil should frequently cut out forms before drawing them, sometimes with scissors as well as with a knife. While studying the elements of geometrical drawing, such as bisecting lines, angles, erecting perpendiculars, etc., he will acquire facility in using the compass. In drawing plans of the school house, play-grounds, etc., of given dimensions, he will become accurate in measuring and accurate in representing measurement.

Arrived at the study of formal geometry, the pupil should previous to drawing his figures on the blackboard for demonstration construct them of pasteboard or paper, etc., whenever practicable, and find out the geometrical truths which he is to establish by demonstration. Industrial tools, whose principles depend upon his geometrical truths, should be explained.

In the teaching of arithmetic how many opportunities are afforded of giving a practical character to the work—by associating articles of commerce in the neighborhood with the questions--requiring the pupils to frame bills of parcels for themselves, and to make them out accurately and neatly! The tables of weights and measures should be determined by experiment and each operation gone through properly, the filling of a gallon or quart from a pint measure, the filling of a pint bottle from a small phial of so many ounces, the measuring of length with a rule or tape line, finding by measurement the content of the play ground, or some other portion of land, all having in view manual dexterity as well as practical knowledge.

Geography, and even history, may be highly practical as well as powerfully educative. The great natural forces and products which underlie all industries—the industries of a country depending on its products and forces—the interchange of these—and the brotherhood of man, are fitted to awaken and keep alive an interest in industrial work and workers.

Every good citizen of an enlightened country respects the institutions under which he lives, he moves amongst its people, he is protected and governed by its laws. His training towards manhood lies through a knowledge and discharge of his duties as a citizen as well as a workman. How much valuable instruction of a practical character may be imparted, and with what interest it will be received, if, instead of loading the pupil's memory with isolated facts little understood and appreciated because they begin and end in themselves, we group together facts that have a bearing upon the great epochs of our history of civil liberty.

A king's reign is not a division of history. Kings die and dynasties, but the great forces move onwards. What are the moving forces? what are the events associated with such forces? Whatever divisions our next text books may make it is by some such treatment as I have indicated that we can hope to make history influence character.

It is unnecessary for me to add one word respecting the importance of a study of method and its principles. The whole of this address goes to show that neither the proper aim of the school nor the wants of society can be met unless the work is conducted upon sound principles of method. It is true that some teachers, and more especially young teachers. are apt to pay more regard to the mechanical processes than to the principles of method, and they cannot of course reach satisfactory results; but no intelligent man would on this ground affirm that method tends only to give a mechanical character to teaching. If method is not fitted to lead to great and important results, why should the institutions of the most enlightened countries take practical steps to give a knowledge of it? Two of the universities of Scotland, Edinburgh and Saint Andrews, have established chairs of education, and the London University has just announced that it will hold a yearly examination in the art, theory and history of education. Socrates, the Greek philosopher, regarded method as the first thing. Comenius, Locke, Rousseau, Basedow (of whose work Goethe says, "such methods must promote mental activity and give the young a fresher view of the world,") Pestalozzi, Frobel—all insisted upon the importance of method, and Alexander Bain and Herbert Spencer, two of the deepest thinkers of our own day, tell us that all modern systems of instruction must be based upon nature's plan and nature's methods.

Miscellany.

A CAVALRY CHARGE.

The roll called, silence succeeded, and some men were detached from each company to bring the bread. In a few minutes the parties returned with the loaves in sacks and baskets. The distribution began at once. As the Republicans had made and had their soup on arriving, they buckled their loaves on their knapsacks.

"Now," cried the commandant, in a gleeful voice, "we are off."

He took up his trunk, threw it over his shoulder, and went out without saying as much as "Good day" or "Good night" to us.

We thought we had seen the last of them.

We heard the officers outside shout, "Forward! March!" The drums sounded, the cantinière cried "Gee up" to her mule, and the battalion began to move, when a terrible sort of clatter echoed through the village. It was a fire of musketry; now many together, now one by one.

The Republicans were just entering the street.

"Halt!" cried the commandant, standing up in his stirrups to see and hear.

Suddenly a soldier appeared at the end of the street, running with his musket over his shoulder.

"Commandant," he cried, out of breath, from a distance, "the Croats! The post is forced: they are here.

The commandant no sooner heard this than he galloped at full speed along the line, shouting—

"Form square!"

The officers, the drummers, and the cantinière closed up to the fountain, whilst the companies, sliding together like a pack of cards, in less than a minute formed a square three deep, the others in the middle; and almost at the same time there arose a fearful din: the Croats came on, shaking the very earth. I think I see them now bursting into the street, their great red cloaks floating out behind them like so many flags, their long straight swords advanced, and their heads so bent over their saddles, that their brown, bony faces and long yellow moustaches could scarcely be seen.

I had scarcely time to see and tremble, when the Croats reached the square. At that instant I heard the commandant shout, "Fire!" A crash like thunder followed, and I could hear nothing more for the roaring in my ears. All the face of the square turned to the street had fired; the glass fell in shivers from our window, smoke and cartridge flakes eddied into our room, and the smell of powder filled the air.

With bristling hair, I still looked on and saw the Croats on their big horses towering through the grey smoke, bounding, falling, starting up as though trying to climb over the square; others from behind pressing on and yelling in savage tones "Forvertz! Forvertz!"

"Second rank, fire!" shouted the commandant over the ceaseless shouts and snorts of men and horses. He might have been speaking in our room, his voice was so calm.

Another thunderclap followed. As the plaster fell, as the tiles rattled down the roofs, as heaven and earth seemed to be coming together, Lisbeth, in the kitchen behind, uttered such piercing cries that they sounded over the tumult like a burst of catcalls.

File-firing succeeded the platoon fire. The muskets of the second rank rose, fired, and fell incessantly, whilst the first rank kneeling crossed bayonets, and the third rank loaded the muskets and passed them to the second.

The Croats circled round the square of infantry, striking with their long swords; sometimes a hat fell, sometimes a man. One of the Croats, running back his horse, leaped it over the three ranks right into the square; but the Republican commandah rushed at him, and with a terrible thrust nailed him, so to speak, to the croup of his horse. I saw the Republican withdraw his sabre red to the hilt; the sight made me turn cold all over. I was on the point of flying; but I had scarcely made a movement when the Croats turned and fled, leaving a great number of men and horses on the ground.

The horses tried to rise, and fell again. Five or six of the riders, caught under their horses, tried to disengage their legs; others all over blood dragged themselves along, raised their hands in deprecation, and cried in lamentable tone, "Pardône, Françose,' in fear of being slaughtered. Some, unable to endure their sufferings, begged to be put out of pain. The greater number remained motionless.

For the first time in my life I comprehended death: those men whom I had seen two minutes before, full of life and strength, furiously charging their enemies, with wolf-like bounds, lay there pell-mell, insensible as the stones of the street.

In the ranks of the Republicans there were vacant spaces too, bodies fallen on their faces, and some wounded men with brows and faces covered with blood. They bandaged each other's heads without leaving the ranks, their muskets grounded, and their comrades helping them to tighten the handkerchief and fix the hat over it.

The commandant, on horseback near the fountain, the point of his great plumed hat between his shoulders, and his sabre in his hand, closed up the ranks. The drummers stood near him, and a little further away, close to the trough, were the cantinière and her cart. The bugles of the Croats were heard sounding the retreat. They had halted at the corner of the street; one of their sentinels stopped there, behind the angle of the town hall. His horse's head could alone be seen. Some shots were still fired.

"Cease firing," cried the commandant.

Then all was silence, the distant bugle of the Croats being alone heard.

The cantinière went through the ranks distributing brandy to the men, whilst seven or eight sturdy fellows filled their canteens at the fountain for the wounded, who implored water in lamentable voices.

I, leaning out of the window, looked down the empty street, asking myself if the red-cloaks would dare to return. The commandant gazed, too, in the same direction, speaking to a captain who stood by his horse, resting his hand on the saddle. All at once the captain crossed the square, passed through the ranks, and hastened into our house.

Innumerable shouts of "Hurrah! hurrah!" wild and sharp as the cries of ravens, filled the street from end to end, and almost drowned the blunt rush of galloping horses.

The Uhlans, for they were Uhlans this time, came on like the wind, their lances couched, the sheepskin dolmans floating out from their backs, their ears covered with their hairy caps, their eyes staring, their noses sunk in their moustaches, their great brass-handled pistols sticking in their belts. It was like a vision. I had only time to throw myself back, my blood curdling in my veins, and it was only when the firing recommenced that I seemed to awake as from a dream in a corner of our room opposite the broken window.

The air was obscured, and the square white with smoke. I could only see the commandant, motionless on his horse near the fountain; he might have been taken for a bronze statue seen in the bluish cloud, through which hundreds of red flames were flashing. The Uhlans, like enormous grasshoppers leaping all round, darted out and recovered their lances, or fired their great pistols into the ranks four paces off.

The square seemed to be giving way. It was true.

"Close the ranks! Hold firm!" called the commandant with a calm voice.

"Close the ranks! Close up!" repeated the officers.

But the square gave way; the front face was hollowed like a bow, the centre of it nearly reached the fountain. Swift as lightning the bayonet-guard met the thrust of the lances; but sometimes the man sank down. The Republicans had not time to reload; they no longer fired, and the Uhlans still came on more boldly in ever-increasing numbers, surrounding the square with their whirling masses, and already shouting their cries of triumph, for they thought they had conquered.

I thought the Republicans were lost, when in the crisis of the action the commandant raised his hat on the point of his sabre, and began to sing a song that made my flesh creep, and all the battalion took it up like one man and sang with him.

Instantly the face of the square was redressed, forcing back into the street the masses of horsemen, crowded together with their long lances, like the ears of a corn-field.

This song seemed to render the Republicans furious: it was the most terrible spectacle I ever saw. I have often thought since that men infuriated by battle are more ferocious than wild beasts.

But what was still more terrible was that the rear ranks of the Austrian column at the end of the street, seeing nothing of what was occurring at its opening into the square, still advanced, shouting "Hurrah! hurrah!" so that the front ranks, goaded by the bayonets of the Republicans, and unable to retreat, struggled in inexpressible confusion, uttering cries of distress; their tall horses with bleeding noses, their manes stiffened and their eyes glaring, reared and lashed out frightfully with shrill neighs. I saw the unhappy Uhlans, mad with terror, turn and strike their comrades with their lance-staves to force their way through, and scurry off like hares by the side of the barns.

Dead men and horses lay in heaps, from which blood trickled and flowed down the gutter to the sewer.

"Cease firing!" cried the commandant for the second time that morning. "Load!"

At that instant the church clock struck five. The condition of the village at that moment cannot be described—houses riddled with balls, shutters hanging from a hinge, shattered windows, tottering chimneys, the street strewn with broken tiles and bricks, the ruined sheds, the heap of dead men, and the overthrown horses, struggling and bleeding—it is not to be imagined.

The Republicans, diminished by half, their great hats pushed back, waited with shouldered muskets and stern and terrible mien. Behind them, a few steps from our house, the commandant conferred with his officers. I heard him quite well—

"We have an Austrian army before us," he said abruptly, "and the question is to take whole skins out of this. In an hour we shall have twenty or thirty thousand men on us: they'll surround the village with infantry, and we shall be lost. I shall beat a retreat. Has anyone anything to suggest?"

In less than ten minutes they had built a barrier across the street as high as the houses, with hay and straw above and below. The beat of the drums recalled those who were working at it, and at once fire began to climb from wisp to wisp to the top, sweeping the neighboring roofs with its red flame, and spreading its black smoke like an immense vault over the village.

Loud cries arose in the distance, and musket shots rattled beyond it; but nothing was to be seen, and the commandant ordered the retreat.

I saw the Republicans file off before our house, with firm, slow steps, their eyes sparkling, their bayonets red, their hands black, their cheeks hollow. Two drummers marched without beating their drums; the little fellow I had seen sleeping in our barn was there, his drum was on his shoulders, and his back was bent: big tears were falling down his plump cheeks blackened with powder smoke. His comrade was saying to him, "Come, little Jean, come, be brave." He did not seem to hear him. Horatius Coccles had disappeared, and the cantinière also. I followed the regiment with my eyes as it turned the corner of the street.

—*Madame Thérese*, by ERCKMANN and CHATRIAN.

Any teacher sending us the name of a new subscriber and $1.25 can have the School Journal for one year and a copy of Ayre's Orthœpist (price of Orthœpist is $1.00.)

Notes and News.

ONTARIO.

At the last convention of Wellington teachers, the N. W. Association chose the following officers for the ensuing year:—President, P. McEachern; 1st Vice President, A. M. Shields, B.A.; 2nd Vice President, P. Harper; 3rd Vice President, Miss McGeehan: Secretary, A. Spence; Treasurer, Miss A. Doyle; Management Committee, Messrs. W. McEachern, Corbett, Phillips, Wiseman and Lipton. The S. W. Association retained the old staff.

When discussing the superannuation question, Mr. Ross asked the teachers of Wellington if ladies should be made to contribute. The teachers, with cheers, answered "No."

In March last a uniform promotion examination was held in Wellington county. In the North Riding alone, about two hundred candidates passed. All the arrangements were admirable and the result gave general satisfaction.

The following letter just received, speaks for itself. It is gratifying to find that the JOURNAL is on the right track. The publishers are desirous to make the paper a necessity to every live teacher in Canada.

We propose a big "bill of fare" for the coming year and an effort will be made to carry out the programme. The success attendent upon our efforts in the past and the appreciation we have received at the hands of the teaching profession, encourages us to make still further efforts.

At the departmental examination last July the Blenheim Public School has a very creditable record. Out of fourteen candidates sent to the examination two obtained second class grade A, two second class grade B, six third class and one Intermediate. The school has been very prosperous under its present principal, Mr. James Bruce. Last year six of the pupils wrote and all passed.

Hon. G. W. Ross has accepted the invitation of the Frontenac County Teachers' Association, and will attend the fall institute on the 16th and 17th September. He makes two addresses on educational subjects, one to teachers, and one to the general public.—*Napanee Standard.*

Drill and calisthenics are now on the compulsory list for High Schools. Mr. John Bohannan has been appointed drill instructor for the Sarnia High School, and this week he began his duties with a class formed of the boys attending the schools.—*Sarnia Observer.*

"Some time ago you made mention in the JOURNAL of a weekly edition, and wished an expression of opinion. I would go in for it heart and hand. Surely there are enough of us to support a live weekly.—JOS. C. MANNEL."

HONOUR DESERVED.—Mr. Seath, the well-known head master of St. Catharines Collegiate Institute, having been appointed Inspector of High Schools, has resigned the position in which he has made so high a reputation for himself. His place has been filled by John Henderson, M.A., who has long held the position of second master. Mr. Henderson is an Oxford boy, son of Mr. Henderson, postmaster at Chesterfield. He thoroughly deserves the position he has won. The St. Catharines, school is one of the best educational institutions in the province. Not a little of its extraordinary success is due to the ability and industry of Mr. Henderson. We congratulate him and the institution at the head of which he has been placed.—*Woodstock Sentinel-Review.*

A. W. Bannister, B.A., formerly Professor of Latin in Albert College, has been appointed classical and English master in the Farmersville High School.

The High School has begun work for the autumn term with an attendance of 135, rather more than last year on the corresponding date. It was thought by some that the imposition of tuition fees and the opening of Petrolia High School would diminish the attendance considerably.—*Strathroy Age.*

The best and most important part of a man's education is that which he gives himself.—*E. Gibbon.*

Rev. Dr. Mockridge has been appointed Inspector for Schools, city of Hamilton.

FROM THE FAR WEST.—"Office of Steenerson & McManus, law, real estate, and loans, Broadway, south of U. S. Land Office, CROOKSTON, Minn., Sept 4: Gentlemen,—Please find enclosed $1, for which send to me Hughes' "Mistakes in Teaching" and "How to Secure and Retain Attention." Are you still publishing CANADA SCHOOL JOURNAL? and if so, please send sample copy. I wish to see if, after the manner of many school journals, it has fallen from its once high standard. I am, gentlemen, yours very truly, GEORGE J. MCMANUS."

Mr. McClurg, formerly the efficient Principal of the Petrolea Public Schools, has been appointed first Assistant in the Provincial Model School, Toronto. Mr. McIntosh, formerly of Brantford Collegiate Institute, has been appointed second Assistant.

INTERMEDIATE EXAMINATIONS.—Smith's Falls passed 3 Intermediates; Renfrew School passed 4 Intermediates, 4 third class and 1 second class, Grade B; Pembroke passed 1 Intermediate and 1 second class Grade A; Lanark passed 3 Intermediates and 1 third class; Perth passed 8 Intermediates, 5 third class and 8 second class, Grade B's.

At the recent non-professional examination for teachers, Lanark Village Public School passed two seconds, one third and three intermediates, as follows :—Second Class—Andrew Bradford, Grade A; Lizzie Hillis, Grade B. Third Class—Maggie Drysdale. Intermediate—F. Day, Lizzie Drysdale, Carrie Mair. It was a pupil of this school who won the gold medal at the recent Entrance Examination at Almonte, and another who headed the list in Perth Collegiate Institute.

The following pupils of the Ryerson High School passed the first-class non-professional examination :—Grade A.—Wilson Taylor. Grade C.—J. Hogg, E. McKilber. Mr. Taylor was the only person in the Province who obtained a first-class Grade A. nonprofessional certificate.

PRINCE EDWARD ISLAND.

The Charlottetown schools commenced work on the 25th of August with a large number of pupils.

The Prince of Wales College and Normal School re-opened on the 27th of August with 105 students. Eight scholarships were competed for—two for each county and two for Charlottetown. The successful competitors are :—Roderick McNiel, Frederick McMillan, Queen's City; Minnie Howatt, Geo. W. Schurman, Prince County; Thomas McLeod, F. D. McIntyre, Kings County; Maggie Maxfield, John F, Clarkin, Charlottetown.

The Educational Institute will meet on the 6th and 7th days of October. Invitations have been sent to Prof. J. G. McGregor, of Dalhousie College, and Prof. George E. Foster, M. P., of Kings County, N. B. A large and interesting meeting is expected.

Messrs. John Ings and Thomas Foley were appointed members of the Charlottetown School Board. The Government appointed W. E. Dawson, Esq., (ex-Mayor of Charlottetown) Chairman of the Board, *vice* Hon. J. Longworth, whose term expired.

The present popular and worthy Lieutenant-Governor of this Province was, up to the date of his appointment, a member of the Charlottetown School Board. He was an energetic and useful member, and the teachers feel that in him they have a warm friend in the gubernatorial chair.

At the closing session of the Provincial College and Normal School, the Governor-General's silver medal was awarded to Gordon Laird, (son of ex-Governor Laird); and the bronze medal to George W. Sutherland, of Montague. The former was awarded for General Proficiency, the latter for Proficiency in the Normal Department of the College.

The teachers of this Province are beginning to take a lively interest in the CANADA SCHOOL JOURNAL; and many more of them will subscribe for it before the close of the present year.—*Cor. Prince Edward Island.*

NOVA SCOTIA.

The fifth annual session of the Provincial Educational Association met at Truro on the 16th of July. The exercises continued until the evening of the 17th. The place of meeting was the spacious Assembly hall of the Provincial Normal School. In his introductory address the President, Dr. Allison, welcomed the members of the Association to what gave promise of being one of its most interesting meetings, though he deeply regretted that Mr. Ross, the Minister of Education for Ontario, had been unable to attend the Association. He hoped on some future occasion to introduce that eminent educationist to the teachers of Nova Scotia. Proper allusion was made to the presence on the platform of Dr. Rand, and to his important services in the cause of Provincial education.

Mr. A. McKay, Supervisor of Schools for the city of Halifax, was unanimously elected secretary, and Mr. A. J. McEachen, of St. Patrick's school, Halifax, was again chosen assistant secretary. The Executive Committee presented its report and submitted the programme of exercises. The first paper, "A Glimpse at English Schools," was read by J. B. Hall, M. A., Ph. D., of the Provincial Normal School. In this highly-finished production, the interesting results of personal observation in a number of typical English schools, were prefaced by a brief sketch of the history of common school education in England, and an outline of the provisions of the celebrated "Foster Act," of 1870. An illustrative lesson on "the generation and properties of carbonic acid," was given by Mr. A. E. Thompson, a recent graduate of the Normal School. A class of about a dozen small children was handled with great skill, and with results which greatly gratified all present.

The afternoon session began with an address on "Science in Schools," by L. Gordon McGregor, D. Sc., Professor of Physics in Dalhousie College. The learned lecturer alluded to the limited development of scientific education in Nova Scotia, and suggested that neither our common schools nor our colleges were doing their full duty in this important regard. So long as we remained in this condition, so long would the great natural resources of our country, be to a large extent, unappreciated and undeveloped. In other countries technological schools and schools of applied science existed, which served as a powerful stimulus to industrial progress. These resisted on the basis of a diffused interest in scientific study generated in the common schools. Our teachers were earnestly exhorted to study science and to teach it to their pupils. While by profession a scientist, Dr. McGregor took care to guard against a narrow interpretation of his views. He simply demanded for science its rights, but not the rejection *in toto* of other studies which had been found useful. The proper combination of scientific and classical studies should be aimed at.

Principal Calkin, of the Normal School, followed with a paper on "Methods of teaching beginners to read." This valuable paper may be summarized as follows :—

A definite aim and a determined effort were the prime conditions of success in any and every enterprise. A man who aims at nothing, it has been said, seldom misses the mark. This principle of definiteness is as necessary and as important in educational matters as in any other matter connected with human affairs. Teachers should take note of this, and in all their work study to obtain a clear idea of the work undertaken, and also endeavor so to work that when done, all the various parts of his plan may so harmonize and fit together as to make a complete symmetrical whole, no deformities nor decrepit and unsightly defects. The ability to read in itself is of no value, as it is not knowledge but only the means of acquiring knowledge. Hence there are two things to be considered.

1st. The child should be so taught that his ability to read shall become to him an effective means for the acquisition of knowledge.

2nd. The child should be so trained to read aloud that he can convey to others in a distinct, impressive and pleasing manner the ideas of the printed page, thus giving to himself and others the fullest benefit of that which he reads. It is necessary to form habits of good reading even in the earliest stage of a child's life at school. The old method of giving to the child the unmeaning syllables *a-b ab and b-l-a, blas*, or even more significant words, tends to make the child acquire the habit of listless reading—naming words without ever receiving or seeking ideas. A child's first lesson should mean something to him, should show him how objects with which he is familiar may be represented by written characters, that the written characters of his text-book represent the sound of the spoken word. The second aim is to secure to the pupil the ability to read, so as to profit and please others. This involves all those qualities of voice, manner and expression which distinguishes the elocutionist from the drawler and the stammerer. In order to secure this, the instruction must be patient and vigilant. The methods for teaching beginners to read are, at least, four, the alphabetic or A B C, the phonetic, the word and the sentence method. The speaker preferred the phonetic and word methods combined.

The principles of the paper were then illustrated by an interesting and apposite class exercise conducted by Miss Miller, a graduate of the Normal School.

A very largely attended public meeting was held on the evening of the first day of the session. The Superintendent of Education, in opening the proceedings, referred to the fact that Nova Scotia was just concluding her first twenty years' experience of the Free School system. He claimed that the Province was richer, stronger and better than she could possibly have been had her statesmen of two decades ago decided to let her jog along in the old way. Much yet remained to be done,

but public education in Nova Scotia had an honorable past and a hopeful future. The chief speaker of the occasion was Dr. Rand, Professor of Education and History in Acadia College. The subject presented to the audience, was the position occupied by the teacher in the eyes of the community as measured by the financial recognition accorded him. The magnificent prizes within reach of other professions, notably the legal, were contrasted with the paltry spitends of teachers and the limited possibilities of *their* profession. The speaker showed the magnitude of the trusts committed to the teacher, and the importance of the results which he was expected to educe from the material placed in his hands. He urged the necessity of creating a sound public opinion on the subject, that one of the most important of the professions may no longer be the most poorly paid of all. Rev. E. M. Kierstead, Professor of Logic in Acadia College, followed in a brief but much admirable speech, setting forth the dignity of the teacher's calling, and the power which a true education, symmetric and complete,, enabled its possessor to wield amid the stirring conditions of modern life. Col. Blain, M. P. P. for the County of Colchester addressed a few rigorous remarks to the Association on his favorite topic of Industrial Education. His good natured thrusts at the Educational authorities, whom he seemed to regard as somewhat remiss in seconding his efforts, were thoroughly enjoyed by the audience, and not the least by those against whom they were directed. Mr. Carswell, the noted temperance lecturer of Ontario, who happened to be in the audience was loudly called for, and brought the meeting to a most successful close earnestly exhorting the teachers present to be true Temperance workers both by precept and example.

On Thursday morning the Association, after the transaction of some routine business, listened to an interesting paper from the Assistant Secretary, Mr. McEachen on "the Educational value of the study of Language." The drift of this elaborate essay, which was elegantly composed, was to show the danger of too exclusive devotion to physical science on the one hand, or mathematics on the other. The part which the study of language and literature had played in developing great characters and careers was eloquently described, and a carefully reasoned out exposition was given of the underlying philosophy of the author's theory. Principal McKay (of Picton), who warmly complimented Mr. McEachen on the excellence of his paper, followed with a modest plea in behalf of science, claiming that the scientist argued against by Mr. McEachen was not *the* scientist of true modern progress, the humble devoted student of nature, who made it his sole business to search out and reveal the mind of the great Creator as revealed in his works. The last session of the Association was devoted to the consideration of two valuable papers on subjects connected with health and proper physical development. The first was by Dr. J. W. McDonald, on "School Room Ventilation." In this paper, which was amply illustrated by experiments, Dr. McDonald, who has distinguished himself by the philanthropic earnestness with which he has sought to enlighten the people of Nova Scotia on matters connected with the public health, so combined information, practical suggestions, and earnest exhortation, as to make one of the most valuable contributions to the success of the meeting. Dr. Dodge of Halifax, discoursed in an equally profitable manner on "short-sightness as resulting from defective methods in school life." The learned practitioner called attention also to the general subject of physical Education, and detailed the steps which have been taken at a recent meeting of the Nova Scotia Medical Society to secure the co-operation of the medical and educational authorities in bringing this important matter into greater prominence in the schools. Space does not permit a report of the full and exhaustive discussion which followed the reading of the various papers. The attendance surpassed that of any previous year, the number of registered members was 362.

NEW BRUNSWICK.

St. Joseph's College at Memramcook re-opened Sept. 2nd.

Mount Allison College, Sackville, resumed work Sept. 11th.

The collegiate year of the Provincial University commenced Sept. 18th. Fourteen young men passed the matriculation examination, eight of whom went up from the Collegiate School, Fredericton. In the Freshman Class, some half dozen Counties are represented. The whole number of undegraduates this year will be somewhat less than last year.

The alumni and friends of the Univesity have been much elated by the success of A. W. Duff, A. B., ('84), in winning the Gilchrist Scholarship and gaining the first position among all the candidates examined for matriculation at the London University. Mr. Duff's classmates gave him a complimentary dinner, in the College Hall, on the evening of Sept. 17th on which occasion a number of distinguished graduates and others were present, several of whom indulged in laudatory after-dinnerisms. It is understood that Edinburgh University is to add Mr. Duff to the number of her New Brunswick students.

Mr. Crocket, the Chief Superintendent, was present at the Teachers' Institutes at Shediac in July, and at Hillsboro, Aug. 28 and 29, and gave public addresses in the course of which explanations were made relative to some of the recent changes in the School Law and regulations. There has been quite a breeze of newspaper writing on the subject of these changes.

The Northumberland County Teachers' Institute was to meet at Chatham on the 2nd. and 3rd October. A capital programme was provided.

BERMUDA.

We have been pleased to receive a visit from Mr. Simpson, the able Superintendent of Schools for Bermuda. Mr. Simpson has held the position of Superintendent for over three years, having been sent out by the Colonial office with a view of organizing a school system. The success that has attended his efforts is proof that he is the right man in the right place. Mr. Simpson, after paying a visit to Toronto schools goes to Montreal, then to Boston, thence to Bermuda.

Official Department.

At the request of a number of teachers in Ontario we republish recent regulations with reference to High School Courses.

I. The Course of Study in High Schools and Collegiate Institutes shall consist of such obligatory subjects as may be prescribed by the Education Department, and such optional subjects, within the limits determined by the Department, as may be agreed upon by resolution of the Board of Trustees.

II. The range of instruction in the obligatory subjects is as follows:—

1. English Grammar.—Review of Elementary work; Orthography, Etymology and Syntax; Derivation of Words; Analysis of Sentences; Rendering of Poetry into Prose.

2. English Literature. — Critical Reading of portions of the Works of Authors, to be prescribed from time to time by the Department.

3. Composition and Reading.—(*a*) *Composition*—The Framing of Sentences; Familiar and Business Letters; Abstracts of Readings or Lectures; Themes; The Formation of a good English Style. (*b*) *Reading and Elocution*—including the learning by heart and recitation of selected passages from standard authors.

4. Dictation.

5. History and Geography.—(*a*) Leading Events of English and Canadian History; also of Roman History, from the commencement of the Second Punic War to the death of Augustus. (b) A fair course of Elementary Geography, Mathematical, Physical and Political.

6. Arithmetic and Book-keeping.—(*a*) *Arithmetic*—Simple and Compound Rules. Vulgar and Decimal Fractions; Proportion, Percentage in its various applications; Square Root. (*b*) *Book-keeping*—Single and Double Entry; Commercial Forms and Usages; Banking, Custom House and General Business Transactions.

7. Drill and Calisthenics.—(*a*) *Drill*—The following portions of Squad Drill: Position of the soldier; standing at ease; Dressing a squad with intervals; turnings; extention motions; saluting; instruction in marching; balance step, without advancing; advancing; the slow march; the halt; stepping short; stepping out; marking time; stepping back; changing feet; quick march; side, or closing step; turning when on the march; squad drill in single rank; marching and turning; marching in file; diagonal-march. (*b*) The boys to be ranged in companies, sized from both flanks, and told off in companies, half-companies and sections, and practised in the marches and variations of step which have been taught in single rank; the formation of fours; increasing and diminishing front; wheeling; forming company square. (*c*) *Calisthenics*—the regular exercises for physical development.

III. The range of instruction in the optional subjects is as follows:—

1. Algebra and Euclid —(*a*) *Algebra*—Elementary Rules; Factoring; Greatest Common Measure; Least Common Multiple; Square Root; Fractions; Surds; Simple Equations of one, two and

three unknown quantities; Easy Quadratics. (*b*) *Euclid*—Book I. and II., with easy exercises; Application of Geometry to the Mensuration of Surfaces; Volumes of Parallelopipeds and Prisms, and of the Sphere, Cylinder and Cone.

2. Natural Philosophy, Chemistry and Botany.—(*a*) *Natural Philosophy*—Composition and Resolution of Forces, Principle of Moments; Centre of Gravity; Mechanical Powers, Ratio of the Power to the Weight in each; Pressure of Liquids; Specific Gravity, and modes of determining it; the Barometer, Syphon, Common Pump, Forcing Pump, and Air Pump. (*b*) *Chemistry*—Combustion; the Structure and Properties of Flame; Nature and Composition of Ordinary Fuel. The Atmosphere—Its Constitution; Effect of Animal and Vegetable Life on its Composition. Water—Chemical peculiarities of Natural Waters, such as Rain-water, River-water, Spring-water, Sea-water. Preparation and Properties of Hydrogen, Oxygen, Nitrogen, Carbon, Chlorine, Sulphur, Phosphorus, and of their more important compounds; Combining Proportions by weight and by volume; Symbols and Nomenclature. (*c*) *Botany*—The elements of Stuctural Botany, with special reference to the study of Canadian Plants.

3. Latin and Greek.—(*a*) *Latin*—The Accidence and the Principal Rules of Syntax and Prosody; Exercises; Portions of works in prose and verse, as prescribed from time to time; Learning by heart selected portions; Re-translation into Latin of easy passages. (*b*) *Greek*—Elementary Grammar and Exercises.

4. French or German.—(*a*) *French*—The Accidence and the Principal Rules of Syntax; Exercises; Portions of De Fivas' Introductory French Reader and French Authors, as prescribed from time to time; Re-translation of easy passages into French; Rudiments of Conversation. (*b*) *German*—The Accidence and the Principal Rules of Syntax; Exercises: Portions of Adler's Reader and German Authors, as prescribed from time to time; Re-translation of easy passages into German; Rudiments of Conversation.

5. Music.—Elementary Principles.

6. Drawing.—Linear and Freehand—Elementary Principles.

7. Physiology and Hygiene—Elementary.

8. Principles of Agriculture—Elementary.

SPECIAL SUBJECTS FOR 1885.

English Literature:

1885. *Scott*—The Lady of the Lake, with special reference to Canto V., *Irving*—Rip Van Winkle.

1885. *Cicero*—Cato Major; *Ovid*—Fasti, B. I., vv. 1-300.

French:

1885. *Bonnechose*—Lazare Hoche.

German:

1885. *Schiller*—Belagerung Von Antwerpen, Der Taucher.

Publishers' Department.

W. J. GAGE & CO.

INTERESTING DESRIPTION OF THEIR FACTORY AND WAREROOMS.

We republish, for benefits of the readers of the SCHOOL JOURNAL the following extract which recently appeared in the Toronto *Mail*. No doubt there are some will be interested in reading what others say about us:

The most interesting features in an industrial and commercial centre like Toronto, perhaps, are the factories and warehouses of the merchants. The vast strides made by Toronto's industries during the past few years have frequently been commented upon. Not only do the great extensions of the industries give them a peculiar interest, but the improved machinery that is being used demonstrates the real advance that is being made. New machinery is being used and new methods are being adopted. A visit to the warerooms and factory of Messrs. W. J. Gage & Co., 54 Front St., may prove interesting in this connection. This firm does a very extensive business, which is growing in dimensions every year.

BOOK AND STATIONERY DEPARTMENTS.

In the first two flats of the warehouse, which is one of the largest of the kind in the Dominion, are displayed three large stocks of miscellaneous books and stationery. The book stock embraces the lines of the leading publishers of Great Britain and the United States. The immense stock of stationery and stationers' sundries comprises printing, writing papers, blank books, and manufactured stationery of every description. Two entire flats of the building are used to display goods, and every conceivable kind of stationery and stationers' sundries are to be found there. The neat and careful way in which the goods are displayed, together with the attention that is given, show that the elements of success are not lacking. The stock of blank books, which occupies considerable space, besides being extensive, is of a superior quality. Everything that could be needed in a first-class stationer's and booksellers' store is to be seen there in abundance.

THE MANUFACTURING DEPARTMENT

include envelope making, printing, lithographing, binding, and the other necessary adjuncts. In the lithographing department copy-bookt are printed, and this forms an important part of the business. Not long ago Enlish copy-books were used almost exclusively in Canada. The Canadian article received very little patronage. Matters are now changed and the reverse is the case. The cause of the revolution has been chiefly that enterprising companies have gone extensively into the business and manufactured an article that is not only equal, but superior to that of the English. This is chiefly due Messrs. Gage & Co., who were among the first to recognize the importance of the trade. The copy heads are printed by hand machinery, hence the perfection that is obtained. The making of envelopes is also carried on by Messrs. Gage & Co. The machinery used is the latest and chiefly the better kinds of envelopes are manufactured. The composition and printing departments are under the control of competent men, and the work executed speaks well for their ability.

THE BINDING DEPARTMENT

is in every respects a model one. Until recently perfection had not been reached in binding machinery. Everything was done in a most laborious and expensive way. A creditable job could only be turned out with difficulty. But the bindery of Messrs. Gage & Co. is of quite a different character to that. The most intricate and expensive machinery, which does the work in a style hitherto unknown, is used. Folding machines and stitching machines take the place of hundreds of girls who were formerly employed. Books are folded and stitched without being scarcely handled. The work is done accurately and cleanly. Instead of the cumbersome hydraulic press a very simple one, which has just been perfected, is adopted. After the books are bound they undergo an inspection to make sure that they are all fit for the market.

EDUCATIONAL DEPARTMENT.

The school book publishing of this firm has assumed large dimensions, and their Public and High School text-books are found largely used in every province of the Dominion from British Columbia on the west to Prince Edward on the east. Their grammars, arithmetic, readers, copy books, and a score of others are now recognized as the standard text-books. It is stated that of the copy books alone over half a million are issued annually. The publication of all these books has led to the employment of some of the leading teachers of the country as editors, while the printing and binding necessitates the employment of a large staff of skilled workers, and the consumption of large quantities of paper and other supplies, One of Messrs. Gage & Co.'s specialties is school supplies. Their school books have been adopted almost throughout the whole of the Dominion. In this trade they are the most prominent firm in Canada. Their business as booksellers, stationers, and publishers of educational works bid fair to assume still larger proportions.

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

PROVINCIAL TEACHERS' ASSOCIATION.

ONTARIO—*Continued.*—As provided by the programme, the three sections into which the Association is divided—Public School, High School, and Inspector's sections—met separately for the discussion of matters specially appertaining to the work of those in these three branches of the profession.

In the Public School section, the President, Mr. James Duncan, of Windsor, occupied the chair The first business was the annual address of the President. This address, though brief, was pointed, and dwelt upon several matters of grave importance to the teachers and to the public as well. After eulogizing Dr. Ryerson and dwelling upon the great work that he had accomplished, Mr. Duncan dwelt upon the necessity of closely watching legislation affecting the school system, expressing at the same time great hopes respecting the changes to be made at the next session of the Legislature under the present able and popular Minister of Education. Mr. Duncan expressed grave fears of

the result of the tendency to an increase in the number of female teachers and a corresponding decrease in the number of male teachers. His observation taught him that the ambition of woman was not to conduct a school, but to reign in her own family. Experienced teachers changing their single state for that of married life must necessarily be succeeded by less experienced teachers, and thus it was possible that great evil would be done. The tendency with male teachers particularly was to leave the profession, and thus leave the way open to women. He confessed himself unable to suggest a remedy, except that valuable and skilful teachers should be given inducements to remain in the profession. The question of the Bible in the public schools was also briefly dealt with, the President expressing a preference on the whole for the present system, fearing that any of the changes proposed would lead to discord, and so lessen the efficiency of the school system. A paper was then read by Mr. John Campbell upon the superannuation fund. The paper was an elaborate argument in favor of maintaining the fund, on the ground mainly that the older teachers who had borne the heat and burden of the day for very small stipends could not otherwise be treated with justice. The paper also pointed to the systems of superannuation among clergymen and other classes, and those of foreign countries, as proving the general regard for the principle involved in the present system. Mr. D. J. Murphy, of West Middlesex, was one of the most strongly opposed to Mr. Campbell's views, and in the course of his remarks attacked the present system at a great many points, to show that it was not just in itself, nor was it carried out in such a way as to be fair to all. He complained especially of the forms the teacher had to sign if he sought a superannuation allowance before he reached the age of 60 years. One of the declarations to be made is that the applicant is unable to teach and has no other means of support. This, he contended, placed a premium upon extravagant habits and want of economy. Other declarations were an insult to the teaching profession. After some time a resolution to the effect that the superannuation system should be continued in some efficient form, was carried over an amendment to the effect that those who desired it should be allowed to withdraw the money (with interest) they had paid into the fund, but that the fund should be continued so far as it affected those now on the fund or those who wished it continued. In the High School section Mr. J. E. Bryant, of Galt read a paper on "A Commercial Department in High Schools and Collegiate Institutes" in support of the view that there should be a departmental examination in business subjects. Mr. H. I. Strang, of Goderich, read a paper on "Matriculation Examination in the University," consisting mainly of comments on the curriculum of the University. In the Inspectors' section the discussion was mainly on amendments to the school law, and a number of changes were suggested. Under the present law it is provided that a child shall attend thirteen weeks each term, but a resolution was carried proposing an amendment changing the number to thirteen weeks for the first half year, and nine weeks for the second half year. Another resolution was carried in favor of an increase of the legislative grant to Public Schools, and that the school fund be apportioned each half year, a portion as a fixed grant to each school department, and the balance on the basis of the average attendance. Also that the inspector on completing the apportionment of each of the school grants shall furnish to the county or subtreasurer a statement of the sums apportioned to the several schools—the amount for superannuation having been deducted—and that the treasurer shall pay the said amounts to the teachers on the order of the trustees. *Afternoon Session.*—The Association, as a whole, assembled in the theatre at two o'clock, Hon. G. W. Ross, President, in the chair. The afternoon was devoted to the reading and discussion of papers.

COUNTY MODEL SCHOOLS.

The first was on "How best to secure the permanence, and increase the efficiency, of the County Model Schools," by Mr. G. W. Johnson, of Hamilton. After some preliminary remarks he suggested, in the first place, that reading, mental arithmetic, hygiene, and a review of the first four classes of the public Schools should be taken off the Model School course, thus giving time for matters more in the line of those schools. He noticed that there were some Model Schools which trained very few teachers indeed, while others taught a great many. To close the smaller ones would be to break faith with boards of trustees, who had gone to the trouble and expense of providing for the accommodation of the Model School. Rather than this he believed that the number at the Model Schools should be equalized. Most of the pupils in Model Schools had to go from home in order to study in the Model School, and a few miles further could make little or no difference to them. He denied what was so often said that the existence of a Model School in connection with another was a hindrance to the work of the school. On the contrary, in his opinion it was an advantage rather than a hindrance. He knew as a fact that in many instances the pupils in the Model School showed greater progress than those who had not had the advantage of having the lessons presented by a number of teachers. He made a number of suggestions as to the work of the Model Schools, all tending to the view that the practice as well as the theory should be to teach young teachers how to teach. He thought that the Government grant should be increased to those schools in which the Principal was free to give all his time to Model School work. As the third-class certificates were now good in every part of the Province, the examinations should be uniform. (Applause.) The final examination should occupy the last week of the term and should be taken up with the actual work of teaching by the candidates under the eye of the examiners. The County Board in his opinion, should consist only of three members, the city, town, or county inspector, chairman, and the principals of the city, town, or county High and Model Schools. A fee of $5 was now charged each student teacher. Supposing there was an average of 18 in attendance this would make $90, of which $56 should go to the County Board for their services, the balance of $34 being given year by year for the purchase of a good Model School reference library. After other suggestions relating to matters of detail he developed a system for making the third-class certificates permanent which at the same time might be used to weed out teachers who it was clear could not become successful. He believed that County Model Schools must remain a feature of our educational system, and thought that if the suggestions he made were adopted, their efficiency would be increased. (Loud applause.) Mr. Kelly, of Brantford, said that he could not quite agree with all that had been said. He objected to the master of the Model School being a member of the Board, as this principal was rejected in all other cases. He objected altogether to making certificates permanent. Any teacher who was fit to do his work should advance, if he did not he should leave teaching and and take some other position. Mr. McBrian, of Ontario, agreed with the reader of the paper respecting the permanency of third-class certificates because a teacher could do his work better after experience. Mr. Scarlett, while not prepared to favour the idea of the Model School master being a member of the Board, yet thought a good deal of deference should be paid to his report. Mr. Chadwick did not see that it was necessary to maintain all the existing Model Schools. The large ones did just as good work as the small ones, and there seemed to him no doubt that there were too many now in existence.

THIRD-CLASS CERTIFICATES.

A paper on the status and value of third-class certificates was then read by Mr. F. H. Michell, of Perth. He said that as seventy-five per cent. of the teachers were those holding third-class certificates the status of these was most important. The Minister's report showed that there was an increase in the number of those authorized to teach by permits and other—as he considered them—unlawful means. (Laughter.) The President—"Irregular" would be a better word. Mr. Michell—I accept the word. (Renewed laughter.) The increase to which he referred showed that there was a large proportion of teachers who took up the profession as a mere make-shift. He objected strongly to the system of giving three years' certificates, requiring at the end of that time a re-examination on non-professional subjects. He could see no reason for this. If there was to be an examination at all, it should be in the professional branch. Teachers changed about, and were in fact a race of birds of passage, here to-day and away to-morrow. The teachers recruited the ranks of the ministers, the doctors, the lawyers, and the book agents, (Laughter.) Many took up the work merely to secure means to take a course in law or medicine, and this must have the effect of degrading the profession. This might be to some extent overcome by a change in the mode of grading certificates. He objected to third-class certificates being good outside of the county in which they were granted, because the mode of examination differed in different places, and because this offered unfair competition with holders of higher certificates. Teachers, different from people of other classes, made annual agreements, occasioning an annual bickering with the School Board. The agreements should be for an indefinite term at a fixed salary. (Applause.) In order to get over some of the difficulties, he would suggest an increase in the membership of rural School Boards. This would make it more difficult for a schemer to manipulate the Board. He objected very strongly to the proposal at one time made to legislate the salaries up. A good teacher would have no difficulty in getting a good salary. One of the difficulties was that many teachers wanted everything done for them, and did not want to do anything for themselves. Another great difficulty was that the parents took little interest in the schools, except when their children complained, or were not promoted as rapidly as the parents desired. Scholars should be compelled to attend regularly. Often children were allowed to stay away because they did not like the teacher. A teacher's position should not depend upon the likes or dislikes of children. Another difficulty was the shameless way in which too many teachers deserted their employment, breaking faith with school boards and with the public, also the endeavours sometimes made to undermine each other. (Applause.) He had great hope for the future of the profession, and thought that with a proper assertion of their dignity the position of teachers would be better.

CONFLICTING OPINIONS.

Mr. Alexander, of Galt, strongly sympathized with the idea of making third-class certificates permanent. The many certificates becoming void now made places for persons who desired to make teaching a stepping-stone to something else. Yet he thought it must be evident that the great number of new-comers could not be as efficient in their

work as those who had been teachers for three years. In reply to a question from the President, Mr. Alexander stated that in his experience there were many teachers who went out of the profession because they did not care to face the work of a second-class certificate.

SCHOOL FUND.

The report of the School Fund Committee was presented by Mr. J. Dearness, as follows: 1st. That the amount of the legislative grant to public schools be largely increased. 2nd. That a part of each grant (say one-half) be divided equally among all the school sections in the municipality, and that for the purposes of this section each "additional department" count as one-half of a school in making this division. 3rd. That the balance of the legislative grant (say one-half) be appropriated on the basis of the rates of taxation in the several school sections for the previous year, and that the balance of the municipal grant be appropriated on the basis of average attendance for the whole year. The report was adopted without amendment. The main feature of the evening session was an address by Rev. Principal Grant, of Queen's University, on the subject of "Some popular fallacies with regard to education."

PRINCIPAL GRANT'S ADDRESS.

Rev. Principal Grant, called attention to the fact that he did not choose to speak of all fallacies in education, but only some. He did not propose to give them opinions, but to attack fallacies. If opinions were to be given, for instance, he might say that he would prefer to have a non-political head of the Education Department, one having a seat in the House, but not for any particular constituency, and with the right to speak on educational matters, but without the right to vote. He would not argue the proposition, he would merely state it. A Minister of Education would be all the better if he were not a politician. He thought that, in order to progress, they must be freed from the thraldom of mere words and theories. The theory-ridden mind was almost debarred from progress. One of the things to be got rid of above all was conceit. We had got into the idea that we had a perfect system. We took prizes at foreign exhibitions, and intelligent strangers coming here, being interviewed and desiring to say something civil, praised our educational system. We therefore got a conceited idea that we were far ahead of other countries. A true system must aim at sending out the youth with minds flexible and strong. Education should have reference to the race, surroundings, and circumstances of the pupils. What became of all the gold medal winners? No wonder that somebody had said the hope of the country was in its stupid boys. The delicate, sensitive brains were killed by over-stimulation. There was seen the evil of early competitive examinations and of frequent promotion examinations for young children, particularly when the promotion of the teacher depended upon the result. Poor man! He must live though they died. Boys brought to him examination papers, and he confessed that he would be plucked upon them. There was also the result of cramming which left the brain in a congested state. Young men came to college anxious not to study as much as possible, but barely to scrape through. Another result was that the mind was dissipated among a whole lot of subjects. In many schools were the three R's badly done and a great many ologies not done at all. The men who framed the curriculum had no intention of putting in so much, but every man who came along had some new fad and so all this lot of subjects was pressed down upon the poor little shrinking brain. The great thing he thought, was to teach the children how to read. If they taught them to read so as to understand what they read, there was no chamber of the great temple of knowledge which they might not unlock, and if they did not unlock them it was their own fault. Then there should be optional courses, and those studies most useful for their gymnastic results. He highly commended the German system of intermediate schools, and called attention to the fact that the Professors of the Berlin University had declared that even for the study of science, the gymnasium was better than the school in which the science teaching was begun. Rather than a training in mathematics he would train in literature, for a literary training was in his opinion the best for all (Applause.) Taking up another branch of the subject he dwelt upon the fact that it was an old practice to bring the plastic, unawakened mind of the child in contact with the formed and awakened mind of the teacher. That was a good rule. The better the teacher the better the school. Having found what they wanted in education, therefore, the next thing was to find out how to secure the best teachers, retain them, and get the most out of them when at work, and how should they smooth the way of the children to come in contact with these teachers? A host of fallacies clustered round these questions. Some people said that they could get the best teachers by paying them. He did not believe that. To secure teachers they should make the profession thoroughly honourable. To do that they must follow the lines of other professions. It must not be supposed that the best way was to hire teachers by the year; they did not get ministers, or lawyers or doctors in that way. They must enable the teacher to retain his self-respect. It was not calculated to promote the self-respect of the teachers by compelling them to retire at the end of three years unless they passed a higher examination. But they said these teachers were given permits to go on teaching. That was simply putting the rope around the teacher's neck, and giving him to understand that the rope might be tightened and his official life taken away at any time. Again, they would not allow the teacher to examine. If they wanted to find out the pupil's ignorance, that was right. But the object was to find out his knowledge. This system was obsolete in England, and should not be retained here. The Scotch system which enabled boys to study in their own schools, thus enabling them to prepare for college at home was better, to have to go to a school five miles distant was as great an expense as to go to one five hundred miles away, for he had to pay his board in either case, and this must keep many clever boys away. The result was that a great deal more was done with the same grant in Scotland than in England, and the reason, he believed, was largely because of this system of local training for the Universities. The teachers' hampered, pressed back, and harassed, were often told that one of the great needs of their profession was that they should be enthusiastic. What encouragement was there for them to be enthusiastic? No wonder that many left the profession. He asked them to remember that he had been talking about fallacies. Had he been talking about their encouragements his tone would have been different. For they had many things to encourage them, and their position was much better than that of the teachers who had preceded them. They had the grandest material to work upon—minds created in God's own image—and in their hands lay the destiny of the country. He asked them to remember that, and prayed that the blessing of God would rest upon them in their labors.

Hon. G. W. Ross presented the medal won by Mr. W. H. Davis, of the Ottawa Normal School.

LANARK.—The first business was reading minutes and communications. Mr. Michell, I. P. S., and President of the Association, delivered the opening address. Mr. W. A. Smith, Almonte S. School, should have then read a paper on "How to increase the influence of the profession," but failing to take his place, Mr. E. Anderson, No. 2, Pakenham, gave a practical illustration of his method of teaching "Mental Arithmetic to 2nd and 3rd classes." The President called on those present to state any difficulty they had met with in teaching spelling. A number of difficulties were mentioned and written on the black-board; the President then took them up one by one and threw much light upon each. Mr. J. McCarter read a very fine essay on "The Status of the Teacher." The essay was so good that we will not do it the injustice of referring to isolated parts of it. Several teachers joined in a discussion, all commending the essay, and particularly emphasizing the necessity of the teacher being a pattern in morality. Mr. John McDonald, of No. 5, Pakenham, then read a short but instructive paper on "Music in Schools." He advocated the Tonic Sol Fa System as being much simpler, and capable of being more easily and more quickly taught than the common method. Dr. McLellan highly complimented Mr. McDonald for his paper, and said that it was very probable that music and industrial drawing would soon be made compulsory subjects in our High School curriculum. Dr. McLellan then gave a short but instructive address on the best method of teaching reading, pointing out many of the most common errors into which the great bulk of readers are apt to fall. On Friday morning the election of officers took place, with the following result: F. L. Michell, M.A., I.P.S., President; J. McCarter, H.M. P.S., Almonte, Vice-President; H. S. Robertson, Perth M.S., Secretary-Treasurer; Committee of Management—Mr. Jacques, Perth M.S.; Mr. McCreary, S. Falls P.S.; D. M. Ross, Lanark P.S.; J. R. Johnston, B.A., H.M. H.S., C Place; and Miss Finlay, Balderson P.S. Auditors, M. Rothwell, H.M. C.I., Perth, and N. McDonald, Balderson P.S. Mr. Walrond, of the Almonte High School, gave quite a lengthy blackboard illustration of his method of teaching vulgar fractions, and received the thanks of the Association for his papers. Mr. Rothwell then took up the subject of the "Assignment of Home Work." By his remarks we should judge that he was not in all respects in accord with the present state of affairs. Mr. McGregor, of the Almonte H.S., then addressed the Assosiation for half an hour on the subject of "English Composition." He pointed out what he thought were the best methods of teaching the subject—by the teachers speaking correctly, correcting all oral or written mistakes made by the pupil, practical exercises, themes, letter-writing, etc. He claimed that the pupil should commence in some measure the study of English composition the first day he enters the school, and that it should be continued side by side with English Grammar. The last paper was an exceedingly well arranged and well composed one on "The Atmospheres," by Mr. J. R. Johnston, of C. Place H.S. After a short discussion on this subject the convention was brought to a close.

PRINCE EDWARD.—According to programme, the forenoon was spent in visiting the public school, Picton, and observing the methods of teaching followed by the Principal, Mr. R. W. Murray. Arithmetic, Grammar, Dictation and Reading were taken up by the Principal and handled in a very thorough and practical manner. At half-past one the teachers assembled in Shire Hall. The meeting was called to order by the President, Mr. Murray, and opened with prayer by the Inspector, G. D. Platt, B.A. H. M. Faul was appointed secretary. Minutes

of last meeting were read by Secretary and approved by convention. The report of committee, Messrs. Kinney, Faul and Brown, on Chief Superintendent vs. Minister of Education, was next received. Mr. Kinney opened the discussion, and favored removing educational affairs from the arena of politics. H. M. Faul next followed, showing that points in favor of the present system far outweighed those against, and claimed that it was impossible to free educational affairs from politics. He was well supported by Messrs. Brown and Platt, and the following resolution was brought forward: Moved by H. M. Faul, seconded by W. R. Brown, that this convention is of the opinion that it is desirable to retain the present system of administration of educational affairs until at least we have given it further trial. Carried. Mr. Weeks next introduced the subject of Reduction in a thorough and practical manner. A very excellent essay was next read by Miss N. Hicks on "Teachers' Conventions." The subject of Promotion Examinations was discussed, and the present arrangement was approved of. Convention adjourned to meet in Town Hall at 8 o'clock, when an excellent lecture was delivered by Dr. McLellan, an account of which will be found elsewhere. *Saturday*—Mr. John Kinney was appointed delegate to the Provincial Association. A communication from Toronto Public School Principals' Association was next read. This referred to doing away with teachers' superannuation fund. After a discussion by Messrs. Murray, Brown, Dobson, Faul and Trumpour, a committee of Messrs. Dobson, Murray, Nethery and the Inspector was appointed to report at next convention. Mr. Platt next read a communication concerning the establishment of an Art School in Toronto. Dr. McLellan was next introduced. Subject—Literature in Public and High Schools. He stated that literature in the public schools had not been a success. The selections in the Fourth book were very poor, and not the best that the book contained. Gray's Elegy was not among the selections. The English Language stands pre-eminent There is more thought in Shakespeare than in Homer and all Greek poets together. Aim at giving a taste for literature. It should be taught to all the classes. The faculty of story-telling should be cultivated. Literature must be in the teachers first. Mr. Dobson took up the subject of composition under the following headings: (1) Correction of Mistakes, (2) Purity of Language, (3) Figures of Speech, (4) Building of Metaphors, (5) Outline, (6) Reproduction Orally and in Writing, (7) Examples for correction, (8) Paraphrasing, (9) Letters. The Auditor's report was adopted. Convention adjourned. H. M. FAUL, *Secretary.*

REVIEWS.

Ginn, Heath, & Co., have just brought out the American copyrighted edition of Mr. Alexander Gustafson's great book on the Drink Question, which has already been accepted in England as the most complete book on the subject ever made, and one that will be the bible of temperance reformers for years to come. The prominent reviews have pronounced it the fairest, most exhaustive, freshest, and most original of all the literature on the subject that has yet appeared. They also declare it to be most impartial and careful in its evidence, and fair and fearless in its conclusions. Its accuracy is vouched for by the best physiologists and physicians. Mr. Gustafson is a Swede by birth, he is a graduate of Harvard University, and has won high distinction as a thorough student of world politics, and as a political writer of marked insight and acumen, having written articles for the Boston and New York dailies, as well as for the "North American Review," "National Quarterly," and "Atlantic Monthly." Price, $2; by mail, $2.25.

QUESTION BOOK OF STIMULANTS AND NARCOTIC. *By C. W. Bardeen, Syracuse, N. Y.* 38 pp, 10 cts.

This excellent little book is exactly suited to the needs of our schools. It is thoroughly scientific in its matter, containing nothing but hard facts judiciously arranged.

THE TONIC SOL-FA MUSIC COURSE FOR SCHOOLS Bk. I., *by Daniel Batchelor and Thomas Charmburg, Boston: F. H. Gibson: Chicago: S. R. Winchell & Co.*

A collection of studies and songs in the first and second steps of the Tonic Sol-fa Method. The book is beautifully got up, and must prove a treasure to teachers of this new system.

A FIRST BOOK IN GEOLOGY, *by N. S. Shaler, S.D., Boston: Ginn, Heath & Co.* 330 pp., $1.10.

Dr. Shaler, professor of palaeontology in Harvard University, has produced a geology primer of 250 pages strongly marked by the simplicity and rigid accuracy which come from a profound knowledge of the subject. He has succeeded in making a really attractive book which is of special value to teachers on account of the 75 pages of Directions to Teachers. There are about 150 fine illustrations and a great deal of matter of great interest to students of physical geography.

EXERCISES IN TRANSLATION AT SIGHT. *Arranged by A. W. Spratt, M.A., and A. Pretor, M.A., Rivingtons, London.*

Vol. I. Oirginal Passages; Vol. II. English Version.

FIRST LESSONS ON MINERALS, *by Allen H. Richards,* (Guides for Science Teaching No. XIII.); *Boston: Ginn, Heath & Co.*

This book would make an excellent manual for the upper classes of our public schools. It is really a series of lessons on the elements and a few of their compounds.

A PRACTICAL METHOD OF LEARNING SPANISH. *By General Alejandro Ybarra, Professor of Modern Languages in the Martha's Vineyard Summer Institute.* 320 *pp. Ginn, Heath & Co., Boston.*

This book properly assumes that language must precede grammar. It aims at the shortest method of giving the learner a vocabulary and command of the sentence. It does not pretend to be a formal grammar but is rather a series of practical language lessons. Each lesson is divided into three parts; first, important words and phrases, idiomatic constructions, and exercises on the conjugation of the verbs; second, a reading exercise with translation in parallel column; third, a practical conversation to be translated from dictation. Every teacher of language may learn something from the method of the book.

BIOGRAPHY OF EZRA CORNELL, FOUNDER OF THE CORNELL UNVERSITY.—*New York: A. S. Barnes and Company,* 322 *pp.*

This elegant volume gives in readable form an account of the liberal minded patriot who devoted so much of his means to the establishment of Cornel Un versity.

FORTY-SECOND ANNUAL REPORT OF THE BOARD OF EDUCATION OF THE CITY OF NEW YORK.

This volume will be found well worthy of a careful perusal by every one interested in education.

A METHOD OF ENGLISH COMPOSITION, *by T. Whiting Bancroft, Professor of English Literature in Brown University. Boston: Ginn, Heath & Co.* 96 *pp.*

This is a supplementary work designed to outline the logical relations of Rhetoric, and to discuss the different kinds of composition from a rhetorical point of view. This part of the book is well done and the student will find it very helpful. The examples and lists of subjects in part II. are excellent.

MEIN BRUDER, NOVELLE *von Auguste Bender. Philadelphia: Ig. Kohler,* 911 *Arch St.* 109 *pp., papcr.*

Finely printed and well got up. *Kohler's Catalogue* will be useful to students of German.

A PROGRESSIVE SERIES OF INDUCTIVE LESSONS IN LATIN, *by John Tetlow, Master of the Girls' Latin School, Boston.* 340 *pp. Boston: Ginn, Heath & Co.*

This is a piece of substantial work in language teaching. The method of discovery by induction is carried out in these lessons in such a way as to make the learning of Latin a splendid piece of intellectual training in observation analysis, induction, and generalization. Every teacher of classics will learn here something about the *method* of teaching classics to beginners.

HANDBOOK GF LATIN WRITING, *by Henry Preble and Charles P. Parker Tutors of Greek and Latin in Heward University.* 101 *pp. Boston: Ginn, Heath & Co.*

Classical masters will find the first part of this book very suggestive. The exercises are wel adapted to the reqirements of learners, but it would have been better to add a few notes and cautions with each exercise and a few good examp es worked out,

Variety is a very marked feature of the *North American Review* for October. The first two articles, "Moral Character in Politics," by President Julius H. Seelye, and "Why I Wish to Visit America," by the Rev. Dr. Augustus Jessop, are difficult to classify; but each of the remaining six represents a distinct department of thought. In theology we find "The Philosophy of Conversation," by O. B. Frothingham; in medicine "The Origin of Yellow Fever," by Dr. C. Creighton; in law, "Shall the Jury System be Abolished?" by Judge Robert Y. Hayne; in literary critism, "The Genesis of Tennyson's Maud," by Richard Herne Shepherd; in military science "The Development of Machine Guns," by Lieut. C. Sleeman; and in political economy, "The Benefits of the Tariff System," by John Roach and others. All of these subjects are treated in an interesting and original manner.

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Vol. IX. TORONTO, NOVEMBER, 1884. No. 11

Table of Contents.

EDITORIAL :— PAGE.
- The Superannuation Fund 217
- S. D. Pope, Esq..... 218
- Women in University College..... 218
- The School Law of Ontario..... 218
- Normal School Course..... 219
- Notes and Comments..... 220

MATHEMATICAL DEPARTMENT :—
- Brown University, Providence, R. I..... 221
- Education Department, July Examination 221

CORRESPONDENCE..... 222

SPECIAL ARTICLES :—
- Some Ways to elevate the Teachers' Profession... 222
- Col. Parker's Normal School..... 223
- Industrial Training..... 224
- Ohio Teachers' Reading Circle..... 227

EXAMINATION QUESTIONS :—
- Promotion Examinations, North Hastings 228

PRACTICAL DEPARTMENT :—
- Is there a Substitute for the Spelling Book?..... 231
- Removing Difficulties 232
- Organization in Schools..... 233

NOTES AND NEWS :—
- Ontario 234
- New Brunswick 235
- Nova Scotia 236
- British Columbia..... 237

TEACHERS' ASSOCIATIONS 237

REVIEWS..... 240

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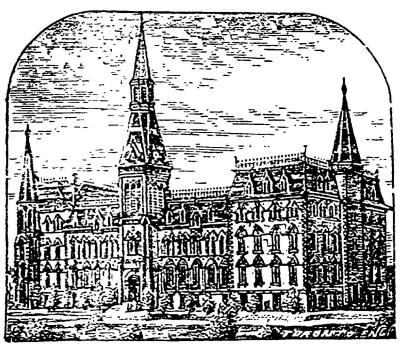
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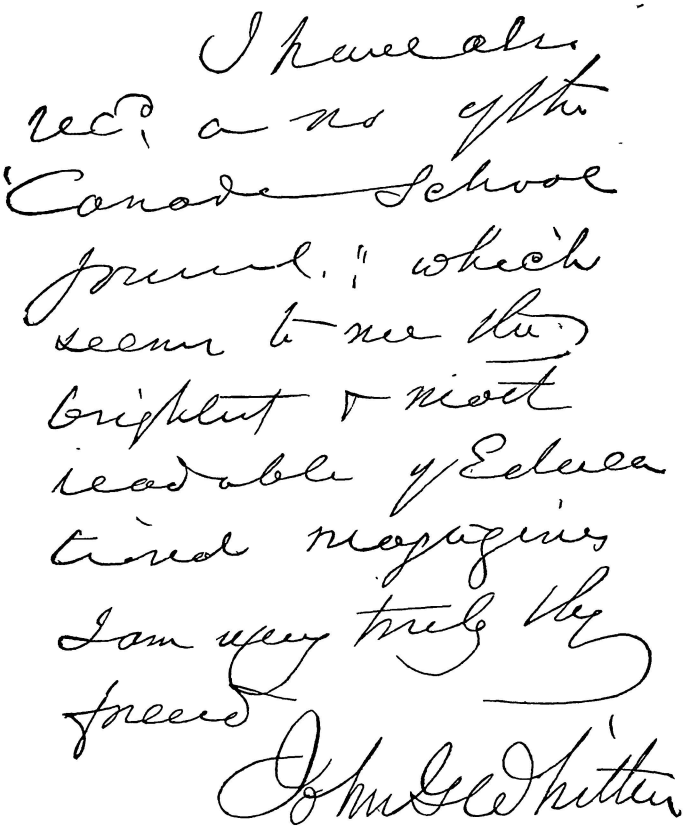
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VOL. IX. TORONTO, NOVEMBER, 1884. No. 11.

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The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

NOTICE TO SUBSCRIBERS.

In view of the "Canada School Journal" being published as a weekly paper on and after January 1st, 1885, we have decided to accept no more subscriptions at the old rate of one dollar. Those whose names are then on our mailing list will be supplied with the "Weekly Journal" in lieu of the Monthly without additional charge until the expiration of their subscription. See our terms for the Weekly "Canada School Journal."

THE SUPERANNUATION FUND.

One of the most important educational questions to be submitted to Parliament will be the future of the Teachers' Superannuation Fund. It has been currently reported that important changes are to be made, and it is said that in some respects these changes will not be in the interests of the teaching profession. We are not in a position to state what the Minister of Education intends to do in regard to this question, but we have reason to believe that the following are among the proposals likely to be submitted to the Legislature:

1. That no payments towards the Superannuation Fund be allowed in future.

2. That teachers shall not be allowed in future to pay arrears for the time they taught before 1871.

These questions are of great importance to those teachers who intend to devote their lives to teaching. If the teachers themselves acknowledge by their indifference that they are not anxious for the continued existence of the fund, our representatives in Parliament may well be excused for doing away with a large annual expenditure in favor of those who have grown old or who have become physically disabled in the profession. We are of opinion that a provident fund should be continued. We do not like the word "superannuation"; it savors of charity. It is surely possible to establish such a fund on an equitable basis. There are three fundamental principles which should be incorporated among the rules for maintaining this fund:

1. The Government should make an annual grant in its favor, based on the actual number of teachers engaged in the province.

2. All teachers, male and female, should pay a minimum sum of say four dollars per annum.

3. Teachers should be allowed to pay more than four dollars each year within certain limitations.

The principle of Government aid has already been granted. The plan proposed would make it as nearly as possible a fixed rather than a variable amount. This would relieve the Government from any fears regarding the possible increase of the demands of the fund to an alarming extent, and it would also enable the teachers to calculate accurately the amount which they would fairly be entitled to receive.

The payment of four dollars per annum by all teachers would simply be a tax or fee connected with the position of a teacher. It would not be unfair to female teachers, as they would, if they continued in the profession, be entitled to the benefits of the fund. It must also be remembered that the very large number of female teachers entering the profession and offering to teach at such low rates, must reduce the salaries of male teachers, and thus prevent their making proper provision for the future. As a larger percentage of women than of men leave the profession, the payments by all teachers would be to the advantage of the fund.

The principle of allowing the payment of more than four dollars per annum by those who wish to provide more fully for their declining years or for ill health seems to be perfectly just. It would induce a habit of thrift and relieve the teachers from all anxiety incident to the investment of their surplus funds in the ordinary securities. A man would feel safe when he had the Government for his bankers.

With regard to the payment of arrears before 1871, we hold that it would be a gross breach of faith for the Government to withdraw the privilege without giving due notice of their intention to do so.

We urge teachers in convention and in other ways to make themselves heard, and to endeavor to secure what they believe to be their rights, and we will be glad to receive for publication in the JOURNAL short communications bearing on any phase of the question.

S. D. POPE, Esq.

CHIEF SUPERINTENDENT OF EDUCATION, BRITISH COLUMBIA.

It gives us pleasure to observe that another Ontario teacher has made his mark abroad—this time in the person of Mr. S. D. Pope, who has lately been appointed Chief Superintendent of Education for British Columbia.

Mr. Pope is a native of Ontario, having been born in the county of Hastings in 1843. He graduated at Queen's, by special dispensation, at the very early age of eighteen, after a brilliant university career, and was styled "The Boy Bachelor."

After some solicitation on the part of the trustees, he accepted the headmastership of what was then called the United Grammar and Common Schools of Stirling, Ont., which position he filled with much acceptance for three years, when he became desirous of seeing the Far West. Resigning the situation, he finally settled in Oregon, where he married. Here he remained for twelve years, after which he removed to his adopted province.

It could not be expected that the highest positions would open to him at sight, and the reverse was the case; but while the discouragements were many, as is the case in every new country, and facilities for enjoyment and comfort few, yet that same determined perseverence that was evinced during his university course carried him on, and in the short space of eight years we find him at the head of the educational affairs of our noble sister province.

In laying the foundation for a wise educational system he will have many difficulties to contend against and numerous discouragements to meet, not to speak of numberless attacks by opponents of reform and advancement; but we trust that with a stout heart and strong hand, such as were displayed by our late lamented chief, Dr. Ryerson, whose fame is in even his enemies' mouths, the cause of education will continue to advance until British Columbia can boast of educational advantages inferior to none in our fair Dominion.

We wish Mr. Pope continued success, and congratulate him on his well-deserved promotion to so distinguished a position. The field before him "is white unto the harvest," while the position is pregnant with responsibility, for the educational well-being of so great a country is no easy burden to bear.

WOMEN IN UNIVERSITY COLLEGE.

The Educational *Monthly* evidently regards with a very unfavorable eye the admission of women to Toronto University College. Three female students and a matron are, according to the *Monthly*, all that the movement has to show for the disturbance created. Our contemporary is of course entitled to its own opinion as to the expediency of admitting women to the Provincial College, but there is no excuse for its misrepresentation of the facts of the case. Instead of three there have been seven women in attendance during the greater part of the present term, and this number will be increased to at least eleven after the Christmas holidays. In view of the fact that the announcement of the opening of the College to women was made on the first of October, the first day of the session, the number of female students is surprisingly large.

Not less so is the high average of their academical standing. There are three in the fourth year, one taking the honor work in classics, and the other two in modern languages. There is one in the third year, taking the honor work in modern languages and mental and moral science. There is one in the second year, taking honor work in natural science and in mental science, and of the two in the first year one takes honor work in mathematics and modern languages. Those coming in next term will probably keep up this high average. In point of fact, therefore, the women who have availed themselves of the advantages afforded by the changed, and now liberal policy of the Government and the College Council, are of a more than usually intellectual type, and their future standing will no doubt be such as to reflect credit on themselves, their sex, and the institution.

It is gratifying to be able to bear the most unreserved testimony to the perfectly unexceptionable conduct of the young men who have hitherto had a monopoly of University College. They have been quietly courteous and gentlemanly, as those who knew them best expected they would be, and there is not the slightest ground for the fear that they will ever be anything else. If there were on the part of individuals here and there a disposition to act otherwise they would soon find themselves sharply dealt with by the sound public opinion of the students generally.

The *Monthly* seeks to create a prejudice against those young women who have sought for and obtained leave to attend lectures in University College, and urges the erection of a separate institution for such women as may desire a university training. To this latter proposal no one offers any objection, but under existing circumstances it is asking too much of women who are willing to attend the Provincial College to require them to wait for the establishment of one for their special use. Those who believe in such a college are at liberty to work, work for it and wait for it. But while they are agitating for what they want they must be taught that people as intelligent and respectable as they are, are not to be sneered at with impunity because they choose to avail themselves of educational facilities already in existence. It is safe to assert that if separate lectures were given to women in a separate college, few, if any, of those now in University College would go to hear them, on account of a very natural and probably well-founded impression that for university purposes the lectures delivered in University College were superior to those delivered anywhere else.

THE SCHOOL LAW OF ONTARIO.

It was a matter of current report, when the health of the Hon. Adam Crooks gave way a few months' ago, that he had for some time been engaged at the task of consolidating the various Education Acts, probably with amendments. The last consolidation was made in 1877, when the general statutes of the Provincial Legislature was revised. Since that time several changes have taken place in the school law, and it would be of great convenience to the public if the Hon. G. W. Ross would

revise the whole of the enactments, consolidate them with such new amendments as might be found expedient, and then give the public a rest for a few years in the matter of educational changes. We have had too many of them altogether in the past. Better sometimes leave an obvious but insignificant defect unremoved than by frequently tinkering at the law make it impossible for the great body of the public to know it, and thus render its administration uncertain and defective.

There are, however, some amendments to the Education Acts so obviously necessary in the public interest that every one who has paid any attention to their working can think of them for himself. One of these is the repeal of the well-known section which makes the amount of school expenditure discretionary to a large extent with municipal councils. This section should never have been enacted. Under the law as it was for a quarter of a century no wrong had ever been done, and great progress had been made in the material development of our public school system. It is safe to say that if the present objectionable restriction on the powers of school boards had always been in the Act, the Province would to-day be dotted over with school houses which, instead of a credit to the people would be a deep disgrace. There is no need for the restriction. Members of school boards, elected for the performance of specific duties in that capacity, are better judges of the amount the educational service of a district should cost than are the members of a municipal council elected for other purposes altogether.

A change in the time and manner of electing public school trustees in towns and cities is also greatly needed. At present they are chosen by wards, one trustee being elective for each ward each year. For this should be substituted the election of, say, one-third of the board each year by the vote of all the ratepayers in the municipality, giving each ratepayer as many votes as there are trustees to be elected, and allowing them to cast them all for one candidate, or divide them amongst several candidates at his own option. This is the plan adopted in the election of the celebrated London School Board, the result being the most efficient administrative educational corporation in the world. Under the present system the calibre of the average school trustee is apt to be extremely small; under the London system the reverse is the case. It would be impossible under our ward arrangement to secure the election of eminent educationists as members of school boards, and yet there should be some of them on these bodies if they can be induced to serve. In London it is a common thing to find men like Prof. Huxley chosen year after year by a more popular vote than our mode of election contemplates. The London School Board has always a few women amongst its members. This is a most desirable arrangement so long as we have female ratepayers, female teachers, and female pupils. Under our system a woman might as well expect election to Parliament as election to a school board.

Even if so fundamental a change does not commend itself to the minister he ought to change the date of the school election in towns and cities so as to enable the ratepayers to elect school trustees on the same day as municipal councillors. With the dates as now fixed the public cannot be induced to take any interest in the election of school trustees. They will not turn out to vote after having voted so short a time before. Let us, if we can have no more, have at least the privilege of the ballot and the synchronizing of school and municipal elections.

Another change very urgently required is in the composition and mode of appointment of high school boards in cities and towns separated from county municipalities. At present the Municipal Council appoints two trustees each year, the board being made up of six members. It would be much better to make high school trustees, like public school trustees, elective by the people, but if this is not done the number should be increased where the population is large. There are always to be found on boards certain members who cannot be induced to take an active interest in the work of school management, and the present mode of appointment, coupled with the smallness of the number of members, is apt to throw the management into the hands of unworthy cliques. In a city of a hundred thousand people a school board of six members appointed by the Municipal Council is utterly inadequate.

There are other matters that well deserve the Minister's attention, though we cannot discuss them fully here. The inequalities in the school burdens of ratepayers in large and small sections have long called for some remedy. The most effective one, apparently, is the formation of township school boards, and as this form of administration is very desirable on other grounds it would be well to inquire whether something cannot be done to secure a more general substitution of townships for sections of townships as the school unit. Perhaps it may be found possible and advisable also to legislate for the encouragement of longer engagements between teachers and school boards, and for the erection in rural sections of residences for teachers. Any improvement that can be effected in either of these directions will be a boon to the teacher and tend to improve the working of the school system.

NORMAL MUSIC COURSE.

In our last issue we noticed a few of the many faults to be found with the First Reader. Our space this month permits of only a short notice of the Second Reader, but we shall again refer to it. This book is intended for advanced pupils attending the Grammar Schools. How far it is suitable for such a class remains to be seen. Several of the objections urged against the First Reader lie equally against this.

1. The preface announces distinctly that the music of this book is all the product of Mr. Tuft's brain. However good it may be, it is fair to suppose that a collection of the gems of children's songs, selected from many writers, would be far preferable, not only as to intrinsic excellence, but in respect of interest and variety. It is always a valid objection to the exercises written by a teacher upon the blackboard that they are in his own peculiar style, and that the pupils are in too narrow limits if they are confined to them exclusively. How much stronger the objection, when an entire book, designed to cover five years of school life, is filled with the productions of one pen.

2. Frequent disregard of the laws of form in the construction of the exercises. See Exs. 9, 15, 75, 77, 121, 210, and

213 and others. This book is less faulty in this respect than the first, however.

3. The early exercises wander too far from the fundamental harmonies and from natural progressions to be most largely useful in training the musical perceptions. There is an effort to bring in all kinds of progressions, whether they make sense or not.

4. There is here again a great quantity of very dry exercises without any very definite aim. For instance, pages 8, 9, 10, and 11 are filled with short scraps of study, in four kinds of time and a dozen forms of measure. The practical summing up of all this naturally to be looked for, appears on page 12, in one song in common time, "There was a piper had a cow"; and the succeeding pages are padded in the same way with quantities of exercises that lead to nothing in particular.

5. The author tries to raise the wind again by printing his peculiar version of the time-name business under the notes of all the one part lessons. This way of using time-name will prove a hindrance rather than a help. The bones of the French inventors would turn in their coffins to hear it.

6. Mother Goose is kept before us again in this book, even to the last year of the Grammar School, see page 205. Our new lights in the world of musical education for children take a good deal of stock in Mother Goose. Many things which are not from that estimable volume of poetry are about on the same level. All those about "My baby in my arms," "Who's been kissing our baby?" "Baby in a cradle," "Sleep, baby, sleep," &c., &c., will be very interesting to the boys doubtless. There are some songs with very appropriate words, but it is singular how large a proportion of these have *only one verse.* "The fount—the fount is dry."

7. The old claim that H. E. Holt *alone* has been able to apply to music "the true educational principle of instruction already known to the best teachers in other directions" is again made in the preface, apparently without a blush. Nothing like cheek. Whose microscope can find anything in the book to justify such a claim as this?

8. The preface alludes to the fact that questions and answers are wholly omitted. This is a wise omission, if they were to be anything like the statements on page 211; for example, "A sharp raises the note a semi-tone." Look at the note and see it rise when a sharp gets before it.

NOTES AND COMMENTS.

We are pleased to notice that Mr. John Henderson, M.A., for many years past assistant principal of the St. Catharines Collegiate Institute, has been appointed to the position of head master of that popular institution. We congratulate Mr. Henderson upon his appointment, and bespeak for the Institute continued success under his *regime.*

Mr Ruskin's idea of education runs somewhat as follows: Every parish school to have garden, playground, and cultivatable land round it, or belonging to it, spacious enough to employ the scholars in fine weather out-of-doors. Attached to the building a children's library, in which the scholars who care to read may learn that art as deftly as they like by themselves, helping each other without troubling the master; a sufficient laboratory always, in which shall be specimens of all common elements of natural substances, and where simple chemical, optical, and pneumatic experiments may be shown, and, according to the size and importance of the school, attached workshops, many or few but always a carpenter's, and first of those added in the better schools, a potter's. In the school itself, the things taught will be music, geometry, astronomy, botany, zoology, to all; drawing and history to children who have the gift for either; and, finally, to all children of whatever gift, grade, or age, the laws of honor, the habit of truth, the virtue of humility, and the happiness of love.

Carlyle says: "If we think of it, all that a university or final highest school can do for us, is still what the first school began doing—teach us to *read.* We learn to read in various languages, in various sciences; we learn the alphabet and letters of all manner of books. But the place where we get knowledge, even theoretic knowledge, is the books themselves. It depends on what we read, after all manners of professors have done their best for us. The true university of these days is a collection of books."

A superintendent should be as vigilant in discovering the *good* work as in detecting the *bad* work of the teacher, and commendation should be wisely given whenever deserved. Just commendation is a duty, as well as just criticism, and frequently the influence of the approving words will be far more useful than words of censure. Reticence, in cases where the reasons of approval or of disapproval are positive, will not tend to inspire teachers with proper confidence in those who oversee and direct. In short, the supervision should be so administered that teachers will feel that *their* interests and those of the pupils and the superintendent are inseparable; yet the fact that the schools were established, and are to be carried on for the benefit of the pupils, should be most prominent in their management. —*N. A. Calkins.*

"OUGH."

SOMERVILLE JOURNAL.

The plowboy whistled behind his plough
For his lungs were sound, and he had no cough;
He guided his team with a pliant bough,
And watered it well at the wayside trough.

The toil was hard, for the land was rough—
It lay on the shores of a Scottish lough—
But is well-fed team was stout anc tough,
And he plied his bough to flank and hough.

He ploughed all day, and the crow and cough
Flew around his head, though he oft cried shough
But his plough at last struct a hidden sough
With a force that sent the share clear through.

Then the team took fright and ran of with the plow,
With the speed of the wind from the plowboy, though
He shouted "Whoe!" and into a slough
It plunged where the mud was as soft as dough.

The plowboy wept, for the wreck was thorough;
He fled that night from the farm to the borough.

The more a diamond is cut the brighter it sparkles, and in what seems hard dealing God has no end in view but to perfect His people's graces.—*Dr Gutrie.*

Mathematical Department.

BROWN UNIVERSITY, PROVIDENCE, RHODE ISLAND.

EXAMINATION FOR ADMISSION.

1. Reduce $\frac{1}{2}$ of 6% of $1\cdot05 \div \frac{3}{5}$ of $\frac{7}{10}$ to the simplest form.

Answer $= \dfrac{1\times6\times105\times25\times10}{2\times100\times100\times3\times7} = \cdot375.$

2. If 17 men can reap a field in 9 days, how long would it take to reap half of it, if 5 men refuse to work?

1 man could reap half the field in $\frac{1}{2}$ of 9×17 days.

12 men " " " " " " $\frac{1}{12}$ of $\frac{1}{2}$ of 9×17 dys. $=6\frac{3}{8}$ dys.

3. A man bought 200 meters of cloth in France @ $16\frac{1}{4}$ francs per meter; he paid $12\frac{1}{2}$c. a yard for duty and freight, and sold it in Boston @ $\$4.62\frac{1}{2}$ a yard. What was his gain. (1 franc=19·3 cts.)

$\$4.62\frac{1}{2} - 12\frac{1}{2} = \$4.50$ = actual selling price.

1 yard = 36 in., ∴ 1 inch costs $\$4.50 \div 36 = \$\frac{1}{8}$

But 1 meter = 39·37043 inches

∴ 1 meter sells for $\$\frac{1}{8}\times39\cdot37043 = \$4\cdot921303$

Again 1 meter costs $16\frac{1}{4}$ f. $= 16\cdot25\times19\cdot3$ cents $= \$3\cdot13625$

gain on 1 meter $= \$4\cdot921303 - \$3\cdot13625 = \$1\cdot784053$

gain on 200 metres $= \$1\cdot784053\times200 = \$357\cdot0106.$

EDUCATION DEPARTMENT, ONTARIO, JULY EXAMINATIONS, 1884.

FIRST CLASS TEACHERS—GRADE C.

ALGEBRA.

Examiner—J. A. McLellan, LL.D.

NOTE—*Ten questions will constitute a full paper.*

1. Divide $x^5-5qx+4r$ by $(x-m)^2$.

Find the relation between q and r, in order that the remainder may vanish.

2. When is any expression symmetrical with respect to two or more of the letters it involves?

(1). Find the square root of $3\{(a+b+c+d)^2+(b+c+d+e)^2+(c+d+e+a)^2+(d+e+a+b)^2+(e+a+b+c)^2-(a^2+b^2+c^2+d^2+e^2)\}$.

(2). Simplify—

$$\frac{(a-b)^2-(b-c)^2}{a^2+ab-bc-c^2}+\frac{(b-c)^2-(c-a)^2}{b^2+bc-ca-a^2}+\frac{(c-a)^2-(a-b)^2}{c^2+ca-ab-b^2}.$$

3. Show that $(x-a)^{12}-x^6a^6+(x^3-ax+a^2)^6$ is exactly divisible by $x^3-2ax^2+2a^2x-a^3$.

Find the factors of $(a^3-b^2)^5+(b^2-c^2)^5+(c^3-a^2)^5$.

4. Show how to extract the square root of a quantity of the form $a+b\sqrt{-1}$.

(1). Find the square root of $-3-\sqrt{-16}$.

(2). Show that one of the fourth roots of -64 is $2(1+\sqrt{-1})$.

5. Solve the equations $ax+by=c$, $a'x+b'y=c'$.

Interpret the result when $\frac{a}{a'}=\frac{b}{b'}=\frac{c}{c'}$

6. Solve the equations—

(1). $$\frac{ax+b}{a+bx}+\frac{cx+d}{c+dx}=\frac{ax-b}{a-bx}+\frac{cx-d}{c-dx}.$$

(2). $$\frac{x}{b+c}+\frac{y}{c-a}=a+b.$$
$$\frac{y}{c+a}+\frac{z}{a-b}=b+c.$$
$$\frac{z}{a+b}+\frac{x}{b-c}=c+a.$$

7. Find the relation between the roots and co-efficients of the equation $x^2+px+q=0$.

If the difference of the roots of the equation $x^2-(m-a)x+b^2=0$ is equal to the difference of the roots of the equation $x^2+(m-b)x+a^2=0$, show that $2m=5(a+b)$.

8. Prove that $\dfrac{a-b}{1+ab}+\dfrac{b-c}{1+bc}+\dfrac{c-a}{1+ca}=\dfrac{a-b}{1+ab}\cdot\dfrac{b-c}{1+bc}\cdot\dfrac{c-a}{1+ca}$

9. Solve the equations—

(1). $$x^3+y^3=a$$
$$xy(x+y)=b.$$

(2). $$\begin{cases}(x^3+x^2y+xy^2+y^3)(x+y)=a\\(x^3-x^2y+xy^2-y^3)(x-y)=b.\end{cases}$$

(3). $$\sqrt[3]{x+\sqrt{2}}+\sqrt[3]{x-\sqrt{2}}=\sqrt{2}.$$

10. Show that if the arithmetical and geometrical means of two quantities be given, the quantities themselves may be found, and give expressions for them.

(1). Sum the series $1-\frac{2}{m}+\frac{1}{m^2}-\frac{2}{m^3}+\frac{1}{m^4}$—&c., *ad inf.*

(2). Show that the sum of n terms of the series $1+3+7+15+\ldots\ldots+(2^n-1)$ is $2^{n+1}-(n+2)$.

(3). Write down four terms of the series whose n^{th} term is $\dfrac{4n^2-1}{4n^2+1}$.

11. The number of combinations of $n+1$ things 4 together is 9 times the number of combinations of n things 2 together; find n.

12. Show that there are only $n+1$ terms in the expansion of $(1+x)^n$ when n is a positive integer.

(1.) Write down the 5th term of $(1-x)^{-2}$

(2.) Write down the middle term of $(1+x)^{2n}$.

SOLUTIONS.

1.

1	$1+0+0+0$	$-5q+4r$
$+2m$	$2m+4m^2+6m^3$	$+8m^4$
$-m^2$	$-m^2-2m^3$	$-3m^4-4m^5$
	$1+2m+3m^2+4m^3$	

∴ $5m^4=5q$, and $4m^5=4r$, *i. e.*, $q^5=r^4$.

2. See Teachers' Handbook of Algebra, p. 32.

(1). Following a we see that $3(3a^2+6ab)$ is part of the result

∴ by symmetry the whole result must be

$=3\{3(a^2+b^2+c^2+d^2+e^2)+6(ab+bc+cd+de)\}$

$=9(a+b+c+d+e)^2$ ∴ Sq. Rt. $=3(a+b+c+d+e)$.

—See Handbook, pp. 34, 35, 36.

(2). 1st fraction $=(a-2b+c)\div(a+b+c)$, hence by symmetry

2nd " $=(b-2c+a)\div(b+c+a)$

3rd " $=(c-2a+b)\div(c+a+b)$

∴ Sum $=0\div(a+b+c)=0$.

—See Handbook, p. 119.

3. (*a*) $x^3-2ax^2+2a^2x-a^3=(x-a)(x^2-ax+a^2)$

Now if $x-a=0$, dividend$=0$, ∴ $x-a$ is a factor.

Again put $x^2-ax-a^2=0$, *i. e.*, $(x-a)^2=-ax$, or $(x-a)^{12}=a^6x^6$ and the dividend immediately vanishes, ∴ x^2-ax+a^2 is also a factor.—See Handbook, p. 48.

(*b*) For a^2, b^2, c^2, write x, y, z respectively and we get $(x-y)^5+(y-z)^5+(z-x)^5$, which $=5(x-y)(y-z)(z-x)(x^2+y^2+z^2-xy-$&c.).

—See Handbook, p. 89, 12, and p. 64, 27—30.

∴ the factors are $5(a^2-b^2)(b^2-c^2)(c^2-a^2)(a^4+b^4+c^4-a^2b^2-b^2c^2-c^2a^2)$

$=5(a+b)(b+c)(c+a)(a-b)(b-c)(c-a)\{(a+b+c)(a-b-c)(a-b+c)(a+b-c)+(a^2b^2+b^2c^2+c^2a^2)\}$

4. Assume $x+y=\sqrt{(a+b\sqrt{-1})}$, ∴ $x-y=\sqrt{(a-b\sqrt{-1})}$,

∴ $x=$&c, $y=$&c, and $x+y=\frac{1}{2}\{2a+2\sqrt{(a^2+b^2)}\}^{\frac{1}{2}}+\frac{1}{2}\{2a-2\sqrt{(a^2+b^2)}\}^{\frac{1}{2}}\sqrt{-1}$.

(1) $-1+2\sqrt{-1}$.

(2) $\sqrt{(-64)}=\pm8\sqrt{-1}$. Take the upper sign and assume $x+y=\sqrt{(0+8\sqrt{-1}}$, ∴ $x-y=\sqrt{(0-8\sqrt{-1})}$

∴ $x^2+y^2=0$, $x^2-y^2=8$, &c., $x+y=2+2\sqrt{-1}$.

5. Book-work. See Colenso, part II, § 48, 49. The equations are not independent of each other; the values of x and y are indeterminate.

6. (1) Transpose and add separately the two pairs of fractions and $ab(1-x^2)\div(a^2-b^2x^2)=cd(1-x^2)\div(c^2-d^2x^2)$

∴ $1-x^2=0$ is one solution, or $x=\pm1$

and $ab\div(a^2-b^2x^2=cd)\div(c^2-d^2x^2)$ gives two more.

(2) Add the equations as they stand; strike out factor 2,

$\therefore$ (a) $\frac{z}{a^2-b^2}+$(b) $\frac{x}{b^2-c^2}+$(c) $\frac{y}{c^2-a^2}=$(a)+(b)+(c)

$\therefore$ by inspection $x=b^2-c^2$, $y=c^2-a^2$, $z=a^2-b^2$ will satisfy the equation and reduce it to an identity, and these values are easily verified on trial.

7. (a) Book-work. (b) Let α, β; K, p be the respective roots. $\therefore$ $\alpha+\beta=m-a$, $\alpha\beta=b^2$; $K+p=b-m$, $Kp=a^3$ and $\alpha-\beta=K-p$. Take 1+5 and 1−5 and $4\alpha\beta=(m-a)^2-(K-p)^2=4b^2$. And from 3 and 4, $(K-p)^2=(b-m^2)-4a^3$. Substitute in the last equation and $5(a^2-b^2)=2m(a-b)$ $\therefore$ &c.

8. Clear of fractions and we have to show that
$(a-b)(1+ca+bc+abc^2)+$anls$=(a-b)(b-c)(c-a)$
i. e. $(a-b)(ca+bc+abc^2)+$anls$=$ " " "; $\because (a-b)+$anls$=0$.
or $(ac-bc)(a+b+abc)+$anls $=$ (") (") (")
i. e., $(ac-bc)(a+b)+$anls$=$ (") (") (") $\because (ac-bc)+$anls$=0$.
or $c(a^2-b^2)+$anls$=(a-b)(b-c)(c-a)$ which is true, $\therefore$ &c.

2ND SOLUTION.—Nr. of sum$=(a-b)(1+bc)(1+ca)+$anl$+$anl.
$(a-b)(b-c)(c-a)$ is one factor of three dimensions, since the sum vanishes for $a=b$, $b=c$, or $c=a$. We may expect another factor of 2 to make up the required 5 dimensions. Hence put
$(a-b)(1+bc)(1+ca)+$anls$=(a-b)(b-c)(c-a)$
$\cdot\{K(a^2+b^2+c^2)+Q(ab+$&c$)\}$
—See HANDBOOK, p. 229; CANADA SCHOOL JOURNAL, May No., p. 104.

Putting $c=0$ and reducing we have
$1=K(a^2+b^2)+Q(ab)$; $\therefore$ Numerator$=(a-b)(b-c)(c-a)$ only.

9. (1) I$\div$II gives $\frac{x^2-xy+y^2}{xy}=\frac{a}{b}$

$\therefore$ $(x-y)^2\div(x+y)^2=(a-b)\div(a+3b)$

$$\frac{x+y}{x-y}=\sqrt{\frac{a+3b}{a-b}}$$

$\therefore$ $x\div y=\{\sqrt{(a+3b)}+\sqrt{(a-b)}\}\div\{\sqrt{(a+3b)}-\sqrt{(a-b)}\}=m$, say,

$\therefore$ $x=my$. And from II, $y=\sqrt[3]{b}\div\sqrt[3]{(m^2+m)}$ &c.

(2) $(x^4-y^4)(x+y)\div(x-y)=a$ } I.
$(x^4-y^4)(x-y)\div(x+y)=b$ } II.

$\therefore$ $(x+y)\div(x-y)=\sqrt{a}\div\sqrt{b}=m$, suppose. (A.)
$\therefore$ $x\div y=(m+1)\div(m-1)$; $x=y(m+1)\div(m-1)$
Substitute this value for x &c.
Or, add and subtract I & II and put $y=zx$.

(3) Cube by formula, p. 11, TEACHERS' HANDBOOK, and then $\sqrt[3]{}(x-\sqrt{2})=0$ $\therefore$ $x=\sqrt{2}$, one solution.
Also $3\sqrt[3]{}(x+\sqrt{2})=-\sqrt{2}$, $\therefore$ $x=-\frac{29}{27}\sqrt{2}$.

10. (1) $S=1-\frac{2}{m}+\frac{1}{m^2}$—&c; $S\div m=\frac{1}{m}-\frac{2}{m^2}+$&c.
$\therefore$ $S(m+1)\div m=(m-2)\div(m-1)$, and $S=m(m-2)\div(m^2-1)$.
(2) $S=1+3+7+$&c., $2S=2+6+14+$&c.
$\therefore$ $2S-S=-1-1-$&c. $+(2^{n+1}-2)=2^{n+1}-(n+2)$.
(3) Put n=1, 2, 3, 4 respectively and we get the series req'd, $\frac{3}{5}$, $\frac{15}{17}$, $\frac{35}{37}$, $\frac{63}{65}$.

11. $(n+1)(n)(n-1)(n-2)\div\lfloor\underline{4}=9(n)(n-1)\div\lfloor\underline{2}$
$(n+1)(n-1)=108=(11+1)(11-2)$, $\therefore$ $n=11$.

12. $(1+x)^n=1+nx+$&c. $+x^n$, where n terms contains x
$\therefore$ there are $n+1$ terms altogether.

(1) $(1-x)^{-\frac{2}{3}}=1+\frac{2x}{3}+\frac{2.5.x^2}{\lfloor\underline{2}.3^2}+\frac{2.5.8.x^3}{\lfloor\underline{3}.3^3}+\frac{2.5.8.11.x}{\lfloor\underline{4}.3^4}+$&c.
ANS. $=110x^4\div 243$.

(2) The $(n+1)^{th}$ = middle term, since $2n$ is even.
This term is $\frac{\lfloor\underline{2n}}{\lfloor\underline{2}\lfloor\underline{n}}x^n$, which is reducible to
1, 3, 5.....$(2n-1)2^n x^m\div\lfloor\underline{n}$.

Read carefully the Prospectus of the Canada School Journal Printing and Publishing Company. Do not hesitate to take shares. The investment is profitable and secure.

Communications.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—Your criticisms in the October number of the JOURNAL, on the First Reader, Normal School Course, have given satisfaction to myself and many of my friends, for we feel that the book is not an improvement on the system of school music in use before.

The songs we have been accustomed to were of an elevating and refined nature, containing moral or patriotic sentiment, and we feel the subject has degenerated in the new books, which abound in trashy stuff such as "Mother Goose," and "Nursery Nonsense." I cannot see the force or benefit of instructing my pupils in that class of songs. It may be considered pardonable in a book arranged for very young children who have to be taught by rote, but when the same kind of matter is introduced into the Second Reader—a book for advanced pupils—I consider it, to say the least, unsuitable. I hope you will notice this point in your next issue, together with other palpable faults.

Surely in the wide range of appropriate school songs something better could be found for *Grammar School* pupils than the one on page 12, Second Reader:—

"There was a piper had a cow,
And he had naught to give her,
He pulled out his pipes and played her a tune,
And bade the cow consider.

"The cow considered very well,
And gave the piper a penny," &c.

Equally edifying with the above is the song on page 67:—

"Tom he was a piper's son,
He learned to play when he was young;
But all the tunes that he could play
Was 'Over the hills and far away.'"

These are two instances out of quite a large number of wishy-washy songs which it is quite ridiculous to expect pupils who have long since quitted Babydom to sing with taste or even to learn.

I cannot see that the Problem of Singing at Sight is any nearer being solved now than it was before. It *may* be learned from the "Normal Music Course," but certainly it will take harder study and longer time than can be devoted to it in our schools. The Tä-tōō-ing alone would occupy all the time we can spare, and it will require no small diligence on our part to learn that new language—evidently elementary Fiji. Yours, etc.,

CITY TEACHER.

Special Articles.

SOME WAYS TO ELEVATE THE TEACHERS' PROFESSION.

BY HOMER B. SPRAGUE, PH. D.

I. We should, perhaps, reverence more highly our calling. We should be more keenly alive to the fact that the most vital interests of any community is the right educaton of the young; that the greatest service that can be rendered to a child is to train him up in the way he should go; and that the five or six hours a day in school give the instructor a greater opportunity than the minister, or even the average parent possesses.

II. Teachers should make themselves more worthy of respect, fitting themselves with the utmost care and with endless painstaking for their work. This involves, among other things, a higher standard than now of the following requisites:

a. General intelligence on the part of the instructor. Something of everything, or, at least, something of many branches of knowledge, he should know. Therewith should come greater breadth and a better perspective.

b. A clear conception and steady view of the results to be aimed at in the training of a child.

c. Mastery of the special subjects taught. On every side the teacher should stand on a vantage-ground, able to construct, off-hand, from his own brain, a sufficient text book, and able, like the best German instructors, to dispense with text-book altogether during recitation.

d. Skill in conducting class exercises. This involves tact, quickness, avoidance of errors, daily planning, daily study by the teacher. For ten, twenty, or even thirty years, the best lawyer, clergyman or physician is growing more expert. It must be so with the true teacher; every school performance by him should be a work of art, adding new skill, and revealing more and more the hand of a master-workman.

e. A hearty love of children, and an intense delight in seeing them grow day by day in grace, in knowledge and in strength. Without this love and joy, this great condition and rich reward of success; the teacher has mistaken his calling. With them, however lofty the ideal, there will be no impatience toward the weak and erring, no sarcasm in his wit, no ridicule in his humor; cheerfulness, courage and hope will rise into inspiration.

f. Health of body and soul on the part of the teacher, in order that there may be tenderness without morbidness, firmness without undue severity in dealing with the pupil. Religious consecration, taking hold of every fibre of the teacher's nature, is the indispensable basis.

III. In aid of this self-improvement the literature of the profession should be in the instructor's hands and on his library shelves. The works on education, now within reach, are already rich in the fruitage of deep thought and wide experience. Some of the educational newspapers and magazines are valuable. They cannot be neglected without loss. The work that is going on in school and college, the successes and failures of the many experiments that have been tried, the biographies and systems of the great educators, ought to be in some good measure known to every teacher of long experience.

IV. Teachers should regard their occupation not as collateral, incidental or temporary, but as central and permanent; not as a convenience or a stepping-stone, but as a life-work.

V. They ought to combine for mutual improvement, mutual cheer and mutual aid. Teachers' clubs; town, county, state, national associations; teachers' insurance companies; the American Institute of Instruction; such organizations should be fostered, their membership increased, their meetings attended and made more useful. In all proper ways an *esprit de corps*, earnest, yet never degenerating into clannishness, should be promoted. Teachers, above all other men, need to look each other in the face and see how strong they are if they will but pull altogether. To hold one's self aloof from these gatherings, to be a sort of *idiotes*, argues conceit or selfishness, or ignorance sadly at variance with the essential spirit of the profession.

VI. Teachers should be alive to their social and civil duties, and disposed, modestly, yet bravely, to maintain their rights; not afraid to take sides on any question that divides the community; having an opinion and ready to maintain it, a vote and ready to cast it. There is hardly a more pitiable spectacle than a teacher too stupid to know, or too selfish to care for, or too cowardly to assert the just claims of his country, his party or his religion. Here should come a quiet but sleepless vigilance, industry and adroitness in elevating public sentiment on school matters, in securing the best men as members of school committees, and in shaping school legislation so as to honor God and bless mankind.

VII. Akin to the preceding, teachers should cherish such a high sense of honor as will not submit tamely to unjust aspersions upon their profession, nor to unfair treatment of any of their number by those in authority over them. It may not at all times be wise to speak out; but when their vocation, or their fraternity, or any one of their number, is publicly slighted, or disparaged, or wronged,—whenever action is taken that appears to be based upon the theory that teachers, as a class, are untrustworthy or incompetent, or pachydermatous,—they should somehow make the perpetrators feel that this thing is not to be done with impunity, and make the public aware of their indignation. Through the newspaper press, or through some high-minded official, or by resolutions published to the world, or otherwise, according to circumstances, the professional honor and rights should be vindicated.—*N. E. Journal of Education.*

COL. PARKER'S NORMAL SCHOOL.

BY MISS EDNA REED.

In the second grammar room the children have been studying the Battle of Bunker Hill. A half-hour in the library one morning gave the class an opportunity to compare different pictures, maps, etc., and they were encouraged to take out books and study the subject at home. They have talked and read in the class, bringing in all the incidents and anecdotes they had gathered, and making black-board sketches of the scene of the battle. The children have ornamented the boards with colored flags, both British and American, and their drawing teachers say every one is anxious to draw flags, soldiers and breastworks.

They are to take the next lesson in the moulding room. The peninsulas of Charleston and Boston will be made in sand on the moulding-board, and meanwhile the boys and girls are making soldiers out of red and blue pasteboard, also ships to put in the harbor, and a rail fence. The commanders have been chosen on each side, and will erect the defences and place the men, subject to the criticism of the soldiers. Uniforms and guns will be described. Each child will then draw on the board a map of the region, locating the principal points on the battle-field. Finally each child will write an account of the battle as he has been led to see it.

In another class the children are reading "Seven Little Sisters"—a book describing seven little girls living on different parts of the globe, their mode of life, and their surroundings. The teacher makes a model of each little girl's house, and places it before the pupils for them to draw. The models are made of cardboard, and the lively imaginations of the children supply whatever is lacking. A camel is seen patiently standing in front of the Arab's tent, and a span of dogs by the hut of the Esquimaux.

Another class is using Scribner's Geographical Reader. The subject under discussion was the manufacture of silk. The silk-worm and the cocoon were exhibited to the pupils, also the silk as it is wound from the cocoon. The teacher gave a short explanation of how silk is manufactured. It is better, when circumstances permit, to refer the pupils to the book, paper, or magazine from which the desired information may be obtained, and request them to report at the next lesson upon the subject. Five minutes' reading in the class, that will result in twenty-five minutes' reading at home with a worthy purpose, is better than half an hour's reading in the

class and none at home. The right habit is the important thing to be gained.

Another class is reading "Little People of Asia." The subject was Turkey, and the way the little Turks are dressed. A doll, provided by the teacher, was taken home by one of the pupils to be transformed into a Turkish baby. The position assumed by the Turks in prayer was shown by the pupils, and the whole lesson made objective.

In another room a class was at work upon long measure. The foot-rule and yard-stick were used. The teacher drew upon the board an equilateral triangle. The pupils measured this figure, and found it to be twelve inches, or one foot, on each side. One of the pupils now wrote upon the board, 12 in. = 1 ft., as the beginning of the table. The teacher then asked the question, "How many inches around the triangle?" After measuring, it was declared to be thirty-six inches, or three feet. The yard-stick was next measured by the pupils, and found to be three feet, or one yard long. A pupil then wrote upon the board, 36 in. or 3 ft. = 1 yd.

The teacher gave this example: Eleven yards equal two rods: how many yards in one rod? The pupils measured off eleven yards on the floor, and discovered one rod one-half of eleven yards, or five and a half yards.. 5½ yds. = 1 rd., was then written upon the board. The class all worked together, and discovered step by step the table of long measure. The children seemed delighted with the lesson, and with the series of lessons which followed. The children like to do for themselves, and were greatly pleased and interested in making practical measurements.

In another class the pupils were engaged in mastering dry measure. The pint, quart, half-peck, and peck measures were in use. A paper bag filled with bran was placed in the corner on sheets of paper spread out upon the floor to catch any bran that might be spilled. As soon as it was decided which was the pint, quart, and peck measure, such questions as these were asked: How many pints in a quart? A pupil filled the quart measure from the pint measure. Then the sentence, two pints makes one quart, was written upon the board. After this they found the number of quarts in a peck, and that was written on the board, and so on through the table. One of the weak pupils quite redeemed his reputation by performing the actual measurements in a careful, and thoughtful manner. After finding how many pecks in a half-bushel, the teacher asked, How many pecks in a bushel? The hands came up, and the bright eyes gave token of the clear seeing, for they had no bushel measure. After a course of ten or twelve lessons had been carefully given, the class was able to continue work in dry measure, changing from one form to another without difficulty. The little girl who discovered that the number of pints in eight quarts and the number of pints in one peck were the same, seemed very happy. The class worked steadily for many lessons upon dry measure with intense interest. Two boys were so pleased with their new number lessons, that they came every morning to ask the teacher if they might be allowed to bring the materials from the basement.

Lessons in honesty and neatness were also taught, for the teacher insisted upon exact measurements, and pouring the bran from one measure to another, training the hands to careful work.

A number lesson was given by Mr. L—— to a class of five pupils. The work was with different colored sticks, two inches in length. The children were told to close their eyes to tell how many sticks were given them, which was an excellent plan, as it cultivated the sense of touch as well as that of sight. They were taught one-half of four, one-half of three; told to take enough more sticks to make six, and to find one-half of six, one-third of six, etc. The leading was so carefully done that the children discovered everything for themselves.

The class added to the six sticks one-third more, when they had eight. They found one-half of eight, telling each time what they had done in full sentences. They took one more stick, and then found one-half of nine sticks, by breaking one of them; one-third of nine was developed. There was a smoothness and unity about the lesson that was beautiful.

The children worked steadily and quietly, and seemed to get a certain fixed power from the manner of the teacher. He took time to let them think, and, what was very charming, he did not disturb them with useless questions when their little minds were engaged with the thing they were working out. The teacher had thought out his subject with reference to the growth of each child, and there was a regular order of steps by which those children were being strengthened in character by the example of the teacher, and in mind by their own exertion.

The drawing has been for some time in straight lines, but lately models made from cardboard have been placed before the classes. In one class it was refreshing to see the interest with which they went to work to draw. There is something about a house, a tent or anything of that kind, that gives a stimulus to the imagination never gained from simple geometrical figures. While the teacher was careful to train their eyes by having them draw the house as correctly as possible, she allowed them to add whatever their imaginations suggested, as trees, fences, etc. Criticisms were always made on the side of utility. For example, if the doors or windows were crooked, the child was asked how it would like to live in such a house; or, if the chimney leaned to one side, what would be likely to happen to it if the wind were to blow hard.

Miss Speer, of the Primary Department, said: A young teacher once said to me, "I like teaching, but I cannot govern my children." Why not?" "Oh, they are doing all kinds of mischief, and are continually troubling me. I really dread going to school some days." I watched her at her work, and found that she actually had a dread and fear that the children would do or say something that would show her weakness. I told her next day that she was showing the children that she was weak, and they were taking advantage of it, and advised her to go before them with such a strong, self-reliant manner as to impress on them the idea that she had an immense amount of reserve power, and that she should act with promptness and decision whenever there was necessity for it. "But," she said, "I am not strong physically; almost every pupil in the class has more strength than I have." "So much more need for you to appear strong," said I. After considering the matter, she did as I suggested, and in time had a well disciplined school, and as she had a love for teaching, became a first-class teacher. She did not practice any deception upon her pupils, but was continually cultivating in herself the habit of self-reliance.

A child said to one of the practice teachers, in answer to a question as to whether her teacher was strict or not, "Yes, she is; that is why I like her. I hate a slimpsey teacher."—*Texas School Journal.*

INDUSTRIAL TRAINING.*

By Industrial Training I mean anything that will tend to enable the hand to represent more accurately in material form the thoughts of the mind. I accept as axioms the following statements: 1. It is possible to train the muscles of the fingers, the hand, and arm, to an almost unlimited extent. In other words, manual dexterity may be cultivated. 2. It is easier to train the hand of a child than that of an older person, and therefore: 3. The sooner the industrial training of a child begins, the more perfect will be his developement.

I. If it be granted that the hand may be trained, the next question to settle is, should it be trained in school? To this question I answer "Yes," for the following reasons: 1. Because the muscles of children are more susceptible to training than those of older people: 2. Because the more extended use of the hand as a means of promoting real mental growth is in harmony with the foundation principles of education. "Children learn by doing" is a principle that admits of a much wider application than has yet been given to it. The hand is the agent of the mind, and forms one means by which the mind acquires knowledge, and makes the results of its thinking take a visible form. The hand acts only as it is directed by the mind. Before a child goes to school he has been learning more rapidly than he ever does afterwards. He has been learning through his activities, by doing and chiefly by doing with his hands. He has experimented indefatigably and almost incessantly with the vast quantity of material with which his Creator has surrounded him in nature. He has constructed an endless variety of things with the available building material at his disposal, sand, stones, sticks, etc.; he has broken his toys, when his parents have been foolish enough to give them

* A paper read by Mr. J. L. Hughes, Inspector of City Schools, Toronto, at th Ontario Provincial Teachers' Asscciation, August, 1884.

to him of too complicated a character, and worked with the pieces; he has kept his mother in constant terror by using every article in the house within his reach, and not too heavy to handle. Why does he spend so much time in working? Because doing is so perfectly adapted to his physical and mental development. All his building, making, and experimenting with material has been done in response to an unerring instinct which guides him in the course which secures for him the most rapid, the most definite, and the most comprehensive expansion of his intellectual faculties, in addition to the cultivation of his bodily powers. The mind acts with more concentration of attention when guiding the hand than at any other time. Observation, comparison, judgment, are called into action in connection with every effort the hand makes, and their constant and interested exercise is their means of growth. Unfortunately the entrance upon school life generally puts an end to this development through the activities, and instead of educating our children in the fullest sense of the term, we too often make them what one writer calls too appropriately "stuffed parrots." The course of study and the discipline in many primary classes is such, that were the schools kept open for twelve hours per day, instead of five or six, the greater portion of the population of civilized countries would become weak in body and mind as the result of the injurious methods employed in them. The boy whose childhood is spent in the country has better opportunities for the natural development in mind and body than the boy who is brought up in a city or town. He comes more directly in contact with nature, he spends less time in school, he plays more, and his plays are of a less artificial character, and he is compelled to do a greater variety of work. By the time he has reached the age of fifteen the city boy has generally more learning, but the country boy has usually a greater capacity for learning. The advantage is decidedly in favor of the country boy.

The power to gain knowledge is much better than knowledge itself. Statistics, so far as they have been taken, show that about seventy-five per cent. of the leading men of the American cities, of the judges, the ministers, the prominent lawyers, doctors, teachers, bankers, and successful business men, spent most of the first fifteen years of their lives in the country. Does this prove that education is a failure in qualifying men for successful careers? Certainly not. It does prove, however, that school education is not always real education. I urge very strongly the need of a revolution in the work of the lower primary classes. We should change the programmes, the methods and the discipline of our schools so far as they relate to the first year of a child's life in them. The guiding principles which should underlie the amended schemes of work and management should undoubtedly be: 1. Let the child during his first year at school deal chiefly with real things, as he did before he entered school; and, 2. let him use things that he may learn not about the things themselves, but that through using them he may incidentally learn new facts, discover new principles, develop his perceptive faculties and define his conceptions. 3. Because it is the right of every man to receive such an education as will best fit him for the successful performance of his duties in whatever sphere he may labor. I do not urge that educations should be considered merely from a utilitarian standpoint. I would omit no opportunity for cultivating the physical, mental and moral natures of children. I hold that our schools will fail, to a certain extent, so long as they do not fit every pupil to advance, as far as possible for him, in the development of purity and truth, so long as they do not guide him towards the infinite source of all development, and lead him to hope for a perfect development in the life that is to follow death. Believing all this, I still regard it as nearly amounting to criminal negligence to allow our pupils to pass through their school life without giving them some definite industrial training. The majority of our pupils will have to earn for themselves and their families, not only the means of livelihood, but of the culture available for them, by the use of their hands. There is not a pupil in our schools, even among those who may not be compelled to work at manual labour, who would not find it to his advantage in the future to have well trained fingers. Surely these facts should convince us of the necessity for systematic training of the hand at the time when its highest culture is most possible and most easily secured. 4. Because the system of apprenticing boys and girls for the purpose of learning trades and occupations has been discontinued. It has disappeared through the instrumentality of trades unions, because it was unsuited to the tastes and customs of modern society, on account of the great increase in the use of machinery in manufactories, and because it was not in accordance with the principles of political economy. Adam Smith objected to it for the following reasons: "It interfered with the property which every man has in his own labor encroached on the liberty of employer and employee, restrained competition, continued in an unnecessary length of time, and failed to allow the rewards of faithful labor to be enjoyed as they were earned." Notwithstanding these inherent objections, it had the merit of securing a class of skilled mechanics, and unfortunately nothing has yet been substituted for it which performs this important function in anything like an adequate manner.

This radical defect must be remedied in some way. The best way, undoubtedly, is a comprehensive system of industrial training. 5. Because improving the mechanical skill of the industrial classes must add to the general wealth and prosperity of a nation. This is a "National Policy Platform" on which all classes can unite. Additional skill produces wealth in two ways: by saving time and by increasing the value of the articles produced. Mr. J. Scott Russell in his "Systematic Technical Education for the English People" says in regard to this question:—"The highest value in the world's markets will be obtained by that nation which has been at most pains to cultivate the intelligence generally, and afterwards to give each the highest education and training in his special calling." 6. The marvellous increase in the use of delicate and intricate machinery in manufacturing demand a more thorough technical industrial training on the part of those who are to use the machines. Dr. Mill, in referring to the well-known fact that the first international exhibitions gave a rude shock to the English people, and aroused them to a realization of the fact that they were far behind several other countries in the excellence of their manufactures, says: "Beaten we were, and that disgracefully too. * * The lace makers of Nottingham saw that foreigners came, purchased their machines, took them home to their own countries, and by setting a more intelligent and artistically trained set of workmen over them produced a class of goods with which it was impossible for our people to compete." 7. Because the number of artistic manufactures is constantly increasing and their character varying, and consequently the workmen specially need skilful fingers that can adapt themselves to any work they may be called on to perform. 8. Because the wealthier classes are calling for a higher style of ornamental woodwork in their houses, and more artistic furniture, etc., differing from ordinary articles of a similar character in construction and design. Machine made articles are turned out in large numbers exactly similar in design. Those who can afford the luxury are anxious to have something special, of which no one else can obtain an exact reproduction. They have to pay higher prices for such articles, and they gladly do so. A painting by a great artist is largely increased in value by the fact that no duplicate copy of it can be obtained. So with a work of art produced by a mechanic. The demand for such work is rapidly increasing. Tradesmen and mechanics of all classes are compelled to vary their workmanship continually. Those who best succeed in doing so can earn most money and earn it most easily. All workmen may be aided in doing so by systematic manual training. 9. Because it will increase the prosperity of the working classes, and will elevate their social position. If a workman can by a higher degree of skill produce a more valuable article than he could otherwise do from a certain amount of raw material, he increases his own value to his employer, and will receive higher wages, because the moral effects of such a training are good. Improving a workman's position will make him more contented and happy. He will be more interested in his work, and more proud to occupy his sphere of labor, in proportion as he is able to excel in it. It will better the relationship between master and workman and improve the character of the work done by artisans. Success will induce him to make greater efforts, and will enable him to surround himself and his family at home with many of the elements of culture and refinement. This manual training has also an important moral influence in moulding the characters of children. They are naturally destructive, but the same tendency which leads them to destroy will make them take a delight in work of a productive character if they are properly guided. It is a very important part of a child's moral training to make him constructive instead of destructive; and working under the guidance of a teacher is the best means of accomplishing this very desirable end. Thousands of children grow up with a contempt for work. They generally become in some way a burden to society. Gaol statistics show that three-fourths of the young men who fall into criminal courses are unable to work at any trade. "Labor, all labor, is noble and holy." The only way to

make this beautiful thought a practical verity is to train all children, rich and poor alike, to be able to work with their hands. This will not by any means make all of them mechanics.

II. What should be done in connection with school work to train the hand, and fit pupils for achieving greater success in industrial pursuits? Before answering this question in detail, I will lay down some general principles which I think should be carried out. 1. No attempt should be made to teach any specific trade. 2. There should be some work in each of the classes in public schools intended to develop hand skill. 3. Boys, as well as girls, should receive industrial training. 4. The work done should be of such a character that all the pupils in a class may engage in it. 5. Below the fourth-book classes boys and girls should do the same work; above this grade the programme may differ, so that the sexes may engage in the work best adapted to qualify them for their future occupations. 6. The materials used, and the apparatus required, must be inexpensive. 7. The products of the work should be suited for practical use. 8. The work done in public and high schools should be supplemented by a few technical schools, and by evening industrial schools. I recommend the following course of Industrial work for the various grades in public schools, 1. Industrial drawing should be taught in all the classes. The Kindergarten system of drawing is, in my opinion, best for first-book classes, and the "Walter Smith" system, approved by our Educational Department, is the best for the other classes. In this subject Ontario is making rapid strides. The thanks of the teaching profession are due to the Honorable Minister of Education for the progressive and liberal course he has recently adopted in providing, free of charge, for the teachers of Ontario the means of learning how to teach this important subject, by establishing vacation drawing classes in charge of competent and experienced masters. One of the great hindrances to the successful introduction of drawing into public schools everywhere has been the generally received opinion that "artists alone could teach drawing." This is a great mistake. Teaching and painting are both arts. It would be folly to conclude that because a man is a great teacher, therefore he can paint; it is nearly as fallacious to conclude that because a man is a great artist, therefore he can teach. A good teacher with a fair knowledge of the principles of industrial drawing will be more successful in teaching drawing than an artist who has had no training in the art of teaching. It is full of promise for the future to see earnest teachers coming from all parts of the province during their vacation to qualify themselves for teaching drawing in an efficient manner. 2. The "occupations" of the Kindergarten form the best basis for industrial training, and are perfectly adapted for introduction into the first-book classes in graded schools. They may also be used to a considerable extent in ungraded schools, as the junior pupils may be profitably occupied with some of them, without the direct supervision of the teacher, while not engaged in class recitation. These occupations were designed by Froebel to occupy a part of the child's time during each day in the Kindergarten; and are intended to continue in a more extended and more definite form under the guidance of the teacher, the same course of "learning by doing" practised by the child before coming to school. The more thoroughly one investigates his system of "Gifts and Occupations" the more clearly he becomes convinced of their adaptation to the nature of children from five to seven years of age, and of their power to attract attention and develop both the intellectual and the industrial abilities of the little ones. Many of Froebel's beautiful Kindergarten songs are also specially designed to cultivate the flexibility and the power of the fingers. His gesture songs, and some of the most appropriate occupations, can be taught in the Normal schools: and by means of vacation classes one lady from each county model school could be trained in them. In this way all teachers coming into the profession would gain a sufficient practical knowledge of these songs and occupations to enable them to introduce them into their schools. One of the most important results of such a course would be, that young teachers might learn that yawning and droning before a reading tablet is not the most effectual means of developing a child's intellect.

The Kindergarten occupations which I think might be satisfactorily introduced by teachers, without requiring to have an intimate acquaintance with the principles and practice of the Kindergarten itself, are paper pasting, paper folding, sewing on cardboard, stick laying, mat weaving, modelling in clay, peas work, and drawing. It must be carefully borne in mind that these form but one department, and a comparatively minor one, of the Kindergarten. 3. For the second and third book classes I recommend, for both boys and girls, plain needle work, especially knitting. We have experimented to a considerable extent in Toronto with a view of finding the most suitable occupations for the pupils in these classes, and can find no other that so satisfactorily fulfils the essential conditions as knitting. All can work at it, and do the same kind of work at the same time; the process of learning it is progressive and can be illustrated by the teacher on the blackboard, or with twine and large wooden needles (pointers suit admirably); the material used is inexpensive; the products are useful articles, and the finger cultivation is excellent. Practically it answers every test. The only objection I have ever heard raised to it was a simple sneer by a newspaper correspondent to the effect that "it would make the boys girlish." Personally I have little sympathy with the customs of society which draw a sharp line between the habits of boys and girls up to the age of twelve. Boys would be improved by being in some respects more like girls, and girls would be much better if they were allowed to indulge in many of the exercises which boys alone are now permitted to enjoy. Boys have no right to a monopoly of the health-giving games, and swimming, rowing, etc., nor should girls alone receive a training of their hands. It is somewhat unreasonable that the girls, whose fingers are cultivated at home by various kinds of needle work, household occupations, piano playing, etc., should be the only pupils for whose finger-training the schools generally make any provision. The poor boys whose "fingers are all thumbs" for lack of exercise, and who require to have more skilful hands than the girls, have too long been neglected by the educators. As most educational reformers have been men, it may have been their gallantry which led them to devote so much attention to the hands of the opposite sex. But, independently of this consideration, the answer to this objection to knitting in schools is easily found. There is nothing inherent in knitting which makes it essentially the work of women only. It would be a poor definition of a man to classify him as "the animal that does not knit." Willingness to work, habits of industry, and trained fingers neither degrade a man or render him effeminate. Quite the contrary! The knitting of the future will not be done to a large extent either by men or women, but by machines, so that the objection raised will soon have less of apparent force than it has now. Do boys dislike knitting? Decidedly not. They take a great interest in it, when it is fairly presented to them. Some even of our fourth-book classes in Toronto have done exceedingly well in knitting, and have entered with much spirit upon the work of making their own comforters, muffetees, etc. For rural schools where straw can be obtained easily, I recommend the plaiting of straw braids for summer hats in addition to needle work. It must be borne in mind that these occupations are recommended not on account of the practical use that may be made of them, but as means for training the hand, and incidentally to cultivate the mind. 4. For the higher classes, especially in cities and towns I recommend the establishment of workshop schools, not as I have already stated for the purpose of teaching any particular trade, but to accustom boys to handle a few tools in common use.

The ability to use a saw, plane, hammer, chisel and square well, will be of service to a boy in any walk of life; and in acquiring this ability he must necessarily obtain practical experience and general ideas concerning the use of tools, which will qualify him better for learning any trade or mechanical occupation.

Work-shop schools have already been introduced very successfully into Boston and Gloucester, Mass., in connection with the public schools. They have long been conducted in England and European countries as special schools, and as evening schools. Superintendent Marvel, of Gloucester, reports concerning them as follows: "The class was first opened as a Saturday class, but, as was expected, comparatively few boys were willing to give their holiday time to shop work. In October, 1880, arrangements were made to accommodate pupils in the carpentry class one-half of each afternoon session on Monday, Tuesday, Thursday and Friday of every week (two classes each session). By this change regularity and punctuality in attendance have been secured; and from a membership of thirty pupils, in three classes there was an immediate advance to a membership of ninety-six in eight classes, each receiving one hour per week. A few girls (six) were permitted to join one of the classes in 1878. There are now two full classes of girls, and there is one class composed partly of each sex. The work of the girls is equally as good as that of the boys, and they seem to enjoy it heartily. The attendance is entirely optional, nearly one-half the pupils in

the first and second classes of the two larger schools desiring to attend. There is no compulsion whatever except that, while members of the industrial class, the pupils are required to be as attentive, industrious, and orderly as during any portion of their school work. There has been a training in the nature of the implements used, in the best methods of employing those implements, constant attention to those habits of method and system which are necessary to secure good work anywhere, and continued practice of the hand and eye in unison, requiring close application as well as clear perception and accurate manipulation. The result is tangible, and the proficiency is measured by no arbitrary standard of percentages, but is clearly defined, and may be estimated with much more precision than in any other line of school work. I do not know of any manner in which fifty to eighty hours can be employed in any form of education where the practical results can be more satisfactorily determined. If the pupil never sees saw, hammer or plane again, the training he has received will be of value, whatever his vocation." The report from Boston is equally definite in its approval. It says: "From the beginning the school went on with unbroken and successful regularity. The order was good, the pupils interested. It is delightful to see the eager desire manifested everywhere to do the day's work well. There was no absence, no tardiness. Here and there a complaint was made by the teacher of some second-class boy, that he was not doing the work well in his own room; but the pupil in every case was so anxious to remain in the "carpenter's" class that a word or two of warning was sufficient to bring his performance up to the standard again. I consider that the results go far to prove that manual training is so great a relief to the iteration of school work that it is a positive benefit rather than a detriment to the course in the other studies." This last sentence is a practical answer to the objection that has, no doubt, arisen in the minds of some who have been listening to my suggestions. There is a large class of teachers, who when urged to introduce calisthenics, or music, or drawing into their schools, answer languidly: "We have no time for them." Experience proves as clearly as anything can be proved, that where most attention is paid to these subjects there is most time left for real work at the other subjects. The teachers who are foolish enough to attempt to make their pupils work sixty minutes per hour for six hours per day, are bound to fail. It is physically impossible for human beings to do this, and at the same time work with the vigor and earnestness essential to success. The "fatigue point" is speedily reached in schools taught by such teachers, and mental work done after this point is comparatively profitless and fearfully exhaustive. Forty-five minutes per hour is the time for actual study in the best model school in Europe, that in Brussels. It is the weariness of school work that kills, and not the amount of work accomplished. The best relief from mental work is physical work, at calisthenics, or some industrial work. In addition to this I have tried to show that the use of the hand in making things is in accordance with nature's method of teaching and really the best method for developing (not storing) the mind. This view is sustained by a resolution adopted by the American Institute of Instruction in July, 1882, as follows: "We recommend the introduction into schools of instruction in the use of tools, not for application in any particular trade, but for developing skill of hand in the fundamental manipulations connected with the industrial arts and also as a means of mental development." The report concerning the shop schools, in connection with the public schools of Paris, where the pupils work a little more time than they study, says: "The boys who work and study fall very little behind the boys of the same age who do nothing but study. The working boys are remarkably healthy, strong, good-natured and orderly." I wish these adjectives could be applied to all Canadian school boys. To make them do so, the first steps must be let to them, "learn by doing," and to give them plenty of calisthenic exercise every hour they are in the schoolroom. One hour per week spent in working with tools would aid in securing the more rapid advancement of the pupils in their studies, even if it was only to be regarded as a change of work, and a relief from the weariness of constant application to study. It would be of still more importance, however, by affording the mind an opportunity for development in the most natural manner by requiring concentrated action of the mental powers to guide the hand.

For the senior girls the most useful occupation is that connected with a training in the various kinds of sewing, and in cutting out and fitting the most simple of their own garments. Cutting from patterns is an accomplishment that can be taught by the regular teachers in cities and towns. In rural districts so few pupils are old enough to receive this kind of instruction and so many of the teachers are men, it will generally be found best to confine the industrial work in them to the course recommended for the lower classes. Male teachers will usually be able to find some of the older girls who can illustrate the steps in knitting to the younger pupils. In cutting out, old newspapers should be used instead of cloth, until a sufficient degree of proficiency has been acquired. It may be objected that Canada is not a manufacturing nation, and therefore we do not need to give our children an industrial education. I answer that the education for which I plead is not an education "in industries, but for industries," and such an education will be most beneficial to all who take part in agricultural and mechanical pursuits. There can be no doubt that in all the civilized nations of the world educators are giving more attention than formerly to this important subject. In addition to the large number of technical and poly-technic schools throughout Europe, schools for special trades are rapidly increasing. There are over fifty in Belguim, more than a hundred in Switzerland, nearly fifteen hundred in Germany, and nearly a thousand each in France and Austria. Nearly fifty institutions for training in agriculture and mechanical arts have been founded in the United States, and under the central government they are rapidly increasing. To use the words of President White, of Cornell University, "this movement is not to be scolded out of existence by solid review articles, or pooh-poohed out of existence by pleasant magazine articles." There are two respects in which educational efforts in industrial education appear to me to be defective: (1) Most of the attention paid to the subject has been given to the higher industrial institutions, the Scientific and Mechanical Universities, to the neglect of a broad primary course as a foundation for this superior training. (2) What little attention has been given in Public Schools to industrial training has been given to the girls, who need it least and who receive most of such training at home. I have tried to suggest a remedy for both these defects; a remedy such that it will also aid in securing a better education in the ordinary branches of the Public school course.

THE OHIO TEACHERS' READING CIRCLE.

E. A. Jones, Secretary of the Board of Control, gave a brief history of the organization of the Reading Circle and its operations during the first year. There are more than two thousand members, the greater part of whom have completed the course prescribed for the first year. Certificates have been prepared for those who have completed the first year's course, and about five hundred of these have already been issued. The Reading Circle is proving a valuable part of our educational effort.

The course prescribed for the second year is as follows:

I. PEDAGOGY.

Currie's Common School Education, or Calderwood on Teaching.

II. ENGLISH LITERATURE.

Shakespeare's Julius Cæsar, and Irving's Sketch-book.

III. AMERICAN HISTORY.

The Revolution, and the Constitutional Period to the close of the War of 1812.

IV. NATURAL SCIENCE.

Brown's Physiology, or Natural Science Primer of Physiology and Hygiene.

Printed slips containing the course may he obtained by addressing the Secretary at Massillon, Ohio.—*Ohio Educational Monthly.*

The Agent in P. E. Island states that every teacher in that Province will subscribe for the Weekly Canada School Journal and secure Ayre's "Verbalist" and "Orthoepist."

Examination Questions.

PROMOTION EXAMINATION. — NORTH HASTINGS UNIFORM PROMOTION EXAMINATIONS JUNE 1884.

ENTRANCE TO FOURTH CLASS.

SPELLING.

Time—45 Minutes.

N.B.—Dicate the Punctuation Marks.

1. There are many authenticated accounts of travellers who, when met by wolves, would have inevitably been devoured had they not terrified their enemies by letting a piece of cord trail behind their carriage.
2. All along the trail lie the skeletons of canoes abandoned by their owners, together with broken paddles and remnants of camp furniture.
3. These salutary seeds yield a pernicious juice.
4. Unconcious of his strength he turned on his assailant.
5. Tigers are morose and untamable.
6. You can buy a blanket or a file, an axe or a pair of trousers, a pound of sugar or a barrel of nails, a roll of tobacco, a tin kettle or a pair of moccasins.
7. "How could it fail?" said Midas.
8. Heaped in the hollows of the grove, the autumn leaves lie dead;

They rustle to the eddying gust and to the rabbit's tread.
The robin and the wren are flown, and from the shrubs the jay,
And from the wood-top calls the crow through all the gloomy day.
Where are the flowers, the fair young flowers, that lately sprang and stood
In brighter light and softer airs, a beauteous sisterhood.

9. Carrot, beet, celery, benefited, compel, moneys, proprietor, niece, European, Great Britain, Arctic Ocean.

Value 100—For every error in Spelling take 3 off; in Capitals and Apostrophes 2 off; in Punctuation 1 off.

GEOGRAPHY.

Time—2 Hours.

1. Define—meridian, parallels of latitude, equatorial diameter, estuary, tide, arctic circle, zones, tropics.
2. What is the longitude of the North Pole? What is the highest longitude? What is the highest latitude?
3. Give, at least three, clearly expressed reasons for concluding that the earth is spherical.
4. Make a list of eight counties in Ontario and opposite to the name of each write the names of two important places in it, exclusive of the county town.
5. Beginning at the east, name the cities of Ontario. Name also one railway entering each city.
6. Through what rivers, canals, and lakes would a vessel pass in going from Montreal to Chicago?
7. Sketch an outline map of the Baltic Sea, marking the inlets and islands, and the countries that border on it.
8. Name four important wheat-growing countries; two in N. America, one in Europe, and one in Asia.

ARITHMETIC.

Time—3 Hours.

Note.—Full work required.

1. Define—fraction, mixed number, simple fraction, multiple of a number, cube, square, cubic yard.
2. A person in making a journey of 189 miles 152 rods 2 feet, travels at the rate of 26 miles 427 yards a day; in how many days will he complete the journey?
3. Multiply 29 acres 157 sq. rods 7 sq. feet by 84 (by factors.)
4. How much hay at $10.50 a ton should be received for 3745 feet of lumber at $14 a thousand feet, 489 lbs beef at $4.75 per cwt., and a pile of wood 14 feet long, 11 feet high, and 8 feet wide, at $2.75 per cord?
5. Find the least number that may be exactly divided by 9, 11, 51, and 36.
6. How much will the lumber cost in a sidewalk $\frac{1}{2}$ mile long and 6 feet wide, at $9 per 1000 sq. feet?
7. Arrange in order of magnitude, (greatest first,) the following fractions:—$\frac{2}{3}$, $\frac{3}{4}$, $\frac{14}{17}$, $\frac{15}{22}$, and $\frac{23}{31}$.
8. A cistern 9 feet square contains 1092 cubic feet; what is its depth?
9. A man owning $\frac{4}{5}$ of a lot, sold $\frac{3}{5}$ of his share for $2800; what was the value of the whole lot?
10. I bought 2 tubs of butter, the tubs and butter together weighing $111\frac{3}{4}$ lbs, and the tubs alone weighing $7\frac{5}{8}$ lbs and 8 lbs respectively: what was the weight of the butter?

Count 100 Marks a Full Paper.

[The teacher will please note that *full* marks are to be given for *correct* solutions only. For answers *nearly* correct (where the method is *quite* correct) from 10% to 50% may be given. In marking, neatness of arrangement, &c., should be taken into account.]

THIRD READER.

Time—1½ Hours.

1. Write this extract substituting, for the words in italics, other words having the same meaning.—

When *reposing* that night on my *pallet* of straw,
By the *wolf-scaring fagot* that *guarded* the *slain*,
At the *dead of the night* a *sweet vision* I saw,
And *thrice* ere the morning I *dreamt* it again.
Methought from the *battle-field's* dreadful *array*,
Far, far, I had *roamed* on a *desolate* track.

2. Explain fully the following expressions:—
(1) Heart hatred of foreign aggression.
(2) Thirsting for revenge. 3) Participators in the game.
(4) Apparently not suspecting any artifice. [faction.
(5) A momentary commotion. 6) An air of mingled stupe-
3. Distinguish between *die* and *dye*, *boy* and *buoy*, *sight* and *site*, *lesson* and *lessen*, *strait* and *straight*, *sore*, *soar* and *sewer*, *seem* and *seam*.
4. Write, in your own language, the parable of The Good Samaritan from the following heads:—

A journey between two Eastern cities,—what happened to the traveller,—state in which he was left,—certain passers-by,—their conduct,—lesson to be learned from the story.

5. Write from memory the first four stanzas of a poem which is an answer to the question the asking of which by a Jewish lawyer led Jesus to relate the parable referred to in IV.

Be careful about capitals, punctuation marks etc.

GRAMMAR.

Time—2 Hours.

1. Analyze the following, naming the simple subject, enlargements of subject, predicate verb, completion, and adverbial enlargements of predicate verb.—
(*a*) *He before* his cottage door was sitting in the sun.
(*b*) By him *sported* on the green his *little grandchild Wilhelmine*.
(*c*) From peak to peak, the rattling *crags among*, *leaps* the live thunder.
(*d*) Never *had* there *been so* great an *excitement* in town.
2. Parse *in full* the italicized words in the sentences analyzed.
3. What is *an adverbial phrase?* Write sentences containing adverbial phrases equivalent to—*shortly*, *whence*, *there*, *when*, *thus*.
4. Write the second person singular of each of the indicative tenses of—sport, do, learn; the feminines of—executor, monk, earl, czar; and the comparatives of— common, able, late, near, and well.
5. Write these sentences correctly, giving reasons for changes made.—
(*a*) He rode to town, and drove six cows, on horseback.
(*b*) He forgets to cross his ts or dot his is.
(*c*) We have opened 5 cases of mens' and boys' overalls.
(*d*) He answered better than any boy in his class.
(*e*) He attends school regular.
(*f*) The children sung hymns.
(*g*) He would have froze to death.
(*h*) Go and lay down for a while.
(*k*) If anyone wants it let him say so.
(One mark for each correction, and two for the reason.)
6. Give the past indicative and past participle of— do, carry, swim.

Count 100 Marks a Full Paper.

COMPOSITION.

Time—1½ *Hours.*

1. Contract the following statements into one *complex* sentence :—Steel is made. It is made by heating small bars of iron with horn or bone shavings. Or with other inflammable substances. By this heating the metal acquires finer grain. It acquires a more compact texture. It becomes harder. It becomes more elastic.

2. Supply the proper words in the following elliptical sentences :—I shall go and —— (*lay* or *lie?*) down. The books are —— (*laying* or *lying?*) on the floor. He —— (*set* or *sat?*) on the bench till sundown. They have —— (*begun* or *began?*) their work. The professor —— us German. Have you —— (*shaken* or *shook?*) the shawl The baby has —— (*fell* or *fallen?*) down stairs. The hen is —— (*setting* or *sitting?*) on its eggs. At what hotel are you —— (*staying* or *stopping?*). It hasn't —— (*came* or *come?*) yet.

3. Correct or improve the language in the following sentences :—My sister called and we both took a walk. The boy said it and repeated it again. My books are to home. She married a man worth lots of money. The pupils took the measles all to once. Hands up ! what cape south of Florida ? James was the tallest. She seldom ever uses the wrong word. They say he has got bad health.

4. Punctuate and put capitals where they should be in the following :—have you read much poetry yes i have read wordsworth tennyson bryant and a few french poets but i do not understand french well enough to enjoy poetry in that language.

5. Write a letter, containing not less than 8 nor more than 16 lines, to a friend living in Toronto :—

Topics :—Your school. Situation. Number of teachers. Number of pupils in your room. Number of classes. Hours of work. Holidays. Subjects of study.

(Three marks for introduction of letter, 3 for conclusion, 24 for composition.)

ENTRANCE TO SENIOR THIRD CLASS.

GRAMMAR.

Time—1½ *Hours.*

1. There *are hearts hard* enough *to resist the force of* wrath, the *malice* of persecution, *and* the fury of *pride*; *but* there *is* a power stronger than *any* of *these* and hard *indeed* is *that* heart *that can resist* love.

Tell the part of speech to which each of the words in italics belongs.

2. Define— sentence, adverb, preposition, composition, imperative sentence, complete subject.

3. Analyze the following, naming the kind of sentence, and the subject and predicate :—

(*a*) Many years ago there was a steamboat plying on one of the American rivers.

(*b*) One day a gentleman called upon Captain Gordon in the cabin.

(*c*) So ended Hannibal's first campaign in Italy.

(*d*) Under her torn hat glowed the wealth
Of simple beauty and rustic health.

(*e*) What is his name ?

(*f*) Show me your nest with the young ones in it.

4. Write these sentences, making any corrections that appear to be necessary :

(*a*) I haint got no slate.
(*b*) Give me them pencils.
(*c*) Me and John seen it.
(*d*) He told James and i.
(*e*) Old Jones has lots of money.
(*f*) He has just came.
(*g*) I catched ten fish last night.
(*h*) This road is awful muddy.
(*k*) Sarah Ann Patterson is our teacher.

THIRD READER.

Time—1½ *Hours.*

1. Write the following passages, using instead of those parts in italics other words or phrases which will give the same thoughts :—

(1) *Ample scope* for *observation.*

(2) A gentleman *was once possessed of* a dog of *singular fidelity* and *sagacity.*

(3) *Insane with wrath* to be thus *outwitted*, the *foe* rushed from his *covert.*

(4) *Surveyed their humble foster-parents.*

(5) This *seemed to decide her uncertainty.*

(6) Was forming this *resolution.*

(7) The wood was *scarce, owing to our proximity to the native village.*

(8) "*A school*" of sperm whales.

2. That, father, will gladly do :
'Tis scarcely afternoon—
The minster clock has just struck two,
And yonder is the moon.

(1) Name the punctuation and other marks in the verse.

(2) Who is the speaker ? Where did she live ? What did she agree to do ? What season was it ?

3. Speak gently ! He Who *gave His life*
To bend men's stubborn will,
When *elements* were in *fierce strife,*
Said to them, "Peace, be still !"

(1) Explain the words and phrases in italics.

(2) Who "gave His life ?"

(4) What event in His life is here referred to ?

(4) Give some reasons for thinking gentleness is better than severity.

4. Where and what are—Austria, Dundee, Delaware, Buffalo, Nile, Kentucky.

5. Tell briefly what you know about—Grace Darling, Casabianca, and Bruce.

6. Write from memory the last two stanzas of "Look aloft !"

SPELLING.

Time—45 Minutes

N. B.—Dictate the punctuation marks.

1. He, partially erect, would seize me with his proboscis.
2. My brother-in-law once had a perilous adventure.
3. I'll employ the boy wearing the parochial livery.
4. We put the agility of the little rogue to a pretty severe test.
5. Of course, the Indian's gun was levelled in an instant.
6. Planting his talons round his adversary's throat, he held him as in a vice.
7. The princess and half the realm.
8. Exhibiting, pursuer, appreciate, occasionally, forty-four, broad, hundred, British Columbia, February, barley, Tuesday, parliament, rye.
9. The hair is very coarse indeed, brown towards the end, and whitish towards the base which is rather wavy, presenting an appearance as if it had passed through a miniature crimping machine.
10. The smoke encircled his head like a wreath.
11. His stomach shook, when he laughed, like a bowl full of jelly.
12. Forgetting her burthen when this she had said,
The maid superciliously tossed up her head :
When, alas for her prospects, her milk-pail descended,
And so all her schemes for the future were ended ;
This moral I think may be safely attached,
Reckon not on your chickens before they are hatched.

Value 100—For every error in Spelling take 3 off ; in Capitals and Apostrophes 2 off ; in Punctuation 1 off.

GEOGRAPHY.

Time—2 hours.

1. What townships of Hastings adjoin—(*a*) Northumberland, (*b*) Lennox, (*c*) Addington, (*d*) Peterboro' ?

2. Canada contains 13 political divisions : name them, specifying those which are merely territories.

3. Define, in complete sentences—sound, watershed, river-basin, rapids, cataract, archipelago, and equator.

4. How are Wardens, Sheriffs, Judges, Reeves, Governors General, Lieutenant Governors, and Magistrates appointed ? Of whom is a County Council composed ?

5. Sketch an outline map of N. America, locating on it the countries (omitting those of Central America), and tracing the courses of the Mackenzie, the St. Lawrence, the Columbia, the Rio Grande, the Colorado, and the Missouri rivers. (N.B.—Mark closely for this.)

6. Trace the course of the water from Lake Nipissing to the Atlantic Ocean.

7. What and where are—Yucatan, Delaware, St. Elias, Popocatapetl, Titicaca, Blairton, Azores, Guinea, Tasmania, New Zealand, Nova Zembla, Sandwich. Answer in complete sentences.

ARITHMETIC.

Time—3 hours.

Note.—Full work required.

1. Define—denominate number, quotient, factor of a number, Roman notation, reduction, denomination of a number.
2. Write neatly the table that is used in weighing pork, hay, &c., and the table that is used in measuring distances.
3. In 5 miles 269 rods 15 feet how many inches?
4. Change 4729334 sq. ft. to acres, rods, &c.
5. A drover bought an equal number of sheep and hogs for $1482; he gave $7 for a sheep, and $6 for a hog: what number of each did he buy?
6. How many barrels of flour at $5 a barrel should be received for 3740 lbs. of oats at 35 cents a bushel, 4260 lbs. of wheat at $1.10 per bushel, 540 lbs. of clover seed at $3.60 a bushel, and 510 lbs. of beef at $10 a cwt.?
7. A man borrows $3500 for 3 years, paying, for the use of it, $8 per year for every $100 borrowed; how much will the use of the money cost him?
8. Find a number such that if the sum of 89 and 256 be subtracted from it the remainder is 12 times 399.
9. The quotient arising from the division of 9281 by a certain number is 17, and the remainder is 373; find the divisor.
10. Find the total cost of 3 cwt. 12 lbs. 8 oz. of butter at 20 cents a lb., 12 gallons 3 qts. of vinegar at 7 cents a pint, 1020 eggs at 15 cents per dozen, 13 bushels of apples at 19 cents per peck, 4500 feet of lumber at $10 per 1000 feet.

Count 100 marks for each paper.

[The teacher will please note that full marks are to be given for *correct* solutions only. For answers *nearly* correct (where the method is *quite* correct) from 10% to 50% may be given. In marking, neatness of arrangement, &c., should be taken into account.]

COMPOSITION.

Time—1½ hours.

N.B.—Capitals and marks of punctuation must be correctly used.

1. Name the marks which are used at the end of written or printed sentences.
2. Describe Montreal, Halifax, Picton, and Ottawa. Let the description of each place be a single sentence which shall contain the answers to the following questions:—*What is it? In what County is it? On what body of water is it situated?*
3. Write the story of "Joseph being put into the Pit," observing these headings:—(1) When was it? (2) Where was it? (3) Who was it? (4) What was it? *(Place the answer to this as the subject of the anecdote.)* (5) How was it done?
4. Write statements or questions containing the following expressions:—the hideous uproar, attempt to describe, intending to run away, proximity, probability, venture, outcasts, consistence of syrup.
5. Combine the following statements into a simple sentence:—Sugar is a sweet, crystallized substance. It is obtained from the juice of the sugar-cane. The sugar-cane is a reed-like plant. It grows in most hot countries. It is supposed to be originally a native of the East.

[Note for the teacher.—Bigsby's "Elements of the English Language," published by Ginn, Heath & Co., of Tremont Place, Boston, Mass., U.S.A., is strongly recommended to those who desire to teach Composition rationally. Its mailing price is 35 cents. —W. M.

ENTRANCE TO JUNIOR THIRD CLASS.

GEOGRAPHY.

Time—2 hours.

1. Draw a map of the County of Hastings, locating (carefully) on it (*a*) the Townships, (*b*) Belleville, Trenton, Deseronto, Stirling, Madoc, Marmora, Maynooth, and (*c*) the course of the Trent, Moira, and Crow rivers.
2. Name the railways (completed or nearly completed) of our country.
3. Define, in complete sentences—ocean, sea, gulf, tributary, plain, lake, and cape.
4. Name a lake on the boundary between Hungerford and Tyendinaga, one partly in Peterboro, and one in each of the following townships:—Huntingdon, Limerick, Tudor, Wollaston, Faraday, Herschel.
5. Name the two most important employments of the people of our country.
6. Name the Warden, the Sheriff, and the Judges of the County; the Reeve of your own Township, and the members of Parliament for North Hastings.
7. Name the streams, post-offices, and villages in your own Township.

SPELLING.

Time—45 minutes.

N.B.—Dictate the punctuation marks.

1. The king gathered together great armies.
2. The doctor seized warm flannels in which he wrapped her.
3. They were busy making presents for that important night, Christmas Eve.
4. You wouldn't buy a new parasol.
5. I'll not describe how prettily they were carved out ivory.
6. Ask your uncle and cousins to get a couple of sickles ready.
7. Presently the hare said, "Good-bye, my friend, your pace is too slow."
8. You will surely succeed if you steadily persevere.
9. Two huntsmen were coming towards the famous glen.
10. The ceiling is not whole, there's a hole in it.
11. Having satisfied himself with sugar he walked out quite leisurely.
12. They've taken such pains to construct us a dwelling.
13. To-morrow we'll go to the brazier's and get a new collar.
14. Loaded his pistol with lead.
15. Tossed the colts' manes over their brows.
16. He doesn't advise you to believe him.
17. Tuesday, saucer, scissors, onion, beet, cabbage, waggon, quotient, divide, factor, Wednesday, model, harness, carriage, carrot, February, ninety, forty-four.

Value 100.

[For every error in spelling take 3 off; in capitals and apostrophes 2 off; in punctuation 1 off.

COMPOSITION.

Time—1½ hours.

1. Write these sentences with the right words in the blanks:—The onions —— growing rapidly.
—— they here ——? The boys —— been sick.
—— the lilies watered?
Most of the —— worn were —— by the farmers' wives and —— from the —— of —— own ——. The people had —— of good and cheap food. The —— was —— and produced splendid ——. The —— were —— of fish.
2. Make statements or questions each containing one or more of the following words or phrases:—very plentiful, the best fun, teeth like pearls, presence of mind, blessing, chestnut.
3. Write the following sentences, making corrections where such are necessary:—i toled you you was wrong. Me and Henry is to blame. How many horses has your boss got? I done my work quickly. I and John are learning Henry his lesson. She has five pairs of gloves. His walking-stick is five foot long. We seen the church.
4. Write questions (using *have* or *has*) about—the snow, five men, my Christmas presents.
5. Make a statement out of these words:—kisses, his, mamma, him, love-words, gives, of, plenty, and.
6. Write full sentence-answers to the following questions:—What are the names of the three villages of Hastings? What things raised, or made, on the farm do our farmers sell? What are the five principal parts of a rocking-chair?
7. Write a composition of five sentences (subject "Our School"). In the first sentence, tell its name; in the second, where it is situated; in the third, the teacher's name; in the fourth, the number of pupils; and in the fifth, name, at least four things you learn in it besides Reading, Writing, Geography, Spelling, and Arithmetic.

Count 90 marks a full paper.

In valuing 7, give 2 for the subject and 5 for each sentence correctly written. Note writing, spelling, capitals, and punctuation.

[Note for Teachers.—Capitals, periods, and marks of interrogation must be correctly used in all the answers when necessary.]

Teachers, stationery is cheap, postage is only three cents, write us frequently and briefly.—Education is alive.

ARITHMETIC.

Time—3 hours.

Note.—Full work required.

1. (*a*) Write in words 2,019; 1,020,600. (*b*) Write in figures XCIX; seventy thousand and twenty-five; nine hundred thousand and fifty-five.

2. (*a*) 8787546-986497. (*b*) 64329÷48 [by factors].
(*c*) 7489×8007.

3. Find the sum, difference, product, and quotient of 4893 and 29. Write the proper name after each answer.

4. Subtract 97639 as often as you can from seven hundred thousand.

5. The sum of four numbers is 20,000; three of them are 697, 4090, and 8976; find the fourth.

6. For a flock of 21 sheep and 43 lambs a farmer received $401. For the lambs he got $2 each; what was the price of a sheep?

7. How much money should a person get for 87 doz. eggs at 15 cents; 49 lbs. butter at 22 cents; and 178 lbs. wool at 45 cents? Find total amount.

8. The product of two numbers is twenty-one thousand three hundred and three; one of them is 789; what is the other?

9. A farmer sold 45 bushels of wheat at 90 cents per bushel, and 60 bushels of oats at 42 cents per bushel: with the money received he bought cloth at 73 cents a yard. How many yards did he buy?

10. How many cows at $45 each should be given for 840 sheep at $18 each?

11. Write correct definitions of *quotient, factors of a number, composite number, product, multiplicand.*

Count 100 marks a full paper.

The teacher will please note that *full* marks are to be given for *correct* solutions only. For answers *nearly* correct (where the method is *quite* correct) from 10% to 50% may be given. In marking, neatness of arrangement, &c., should be taken into account.

For questions 1, 2, and 11 allow nothing for incorrect answers.

SECOND READER.

Time—1½ hours.

1. Many of the Eastern nations had been taught from the remotest ages to expect the birth of a great and wonderful king, who should reign over all the people of the earth.
(*a*) Who was the 'wonderful king'?
(*b*) Name two Eastern nations. Why called Eastern?
(*c*) What is meant by 'remotest ages'?
(*d*) Give the title of the lesson from which this is taken.

2. There are two lessons in the Second Reader entitled "Little Things"; what does each lesson teach us?

3. What is a pilot? There are two pilots spoken of in a short poetical lesson in the Second Book; one leads us to perform whatever we undertake, the other hinders us in all our undertakings. What are their names?

4. Mrs. McKay's *fervent invocation* was in itself an *abundant reward* for their labors.
(*a*) Give meanings of words in italics.
(*b*) To whom does 'their' refer?
(*c*) What 'labors' had been performed?
(*d*) What was the 'reward' received for the labor done?

5. In the lesson on "The Bold Boy and the Coward," in what two respects did the bold boy show he had true courage?

6. Give two meanings for each of the following words—bear, cheered, repaired, several, common, present; also give words meaning the opposite of—ignorance, wealthy, fail, lamenting, mourned, descending.

7. I read the 'sweet story of old.' Tell this story in *your own* words.

8. Write two verses of "The Child's First Grief."

9. And can I ever *cease* to be
Affectionate and kind to thee,
Who wast so very kind to me,
My mother.

Oh no! the thought I cannot bear;
And, if God please my life to *spare*,
I hope I shall *reward* thy *care*,
My mother.

(*a*) Write the above verses using your own words in place of those in italics.
(*b*) What is "the thought" in the first line, second verse.
(*c*) In what ways does this lesson tell us we can partly repay a mother's kindness?

WRITING.

ENTRANCE TO JUNIOR THIRD CLASS.

Second Reader, page 183—"The Birth of our Saviour": first paragraph.

ENTRANCE TO SENIOR III. AND IV. CLASSES.

Third Reader, page 288—"The first of June" to "happy conclusion."

Value—50.

[N.B.—This paper must not be seen by any person but the teacher until the whole examination has been completed.

READING.

ENTRANCE TO JUNIOR THIRD CLASS.

Second Reader, page 200—"We presently found" to "and now, try again."

ENTRANCE TO SENIOR THIRD CLASS.

Third Reader, page 131—"Suddenly the appalling and murderous" to "there was a troop of them."

ENTRANCE TO FOURTH CLASS.

Third Reader, page 244—"The pale warrior, the friend of the Ottawa chief" to "a legion of fiendish voices."

Value—A maximum of 35 marks to be given for ability to read the words correctly at sight; and of 35 marks for expression (including articulation, emphasis, and the natural rendering of the thought).

Practical Department.

IS THERE A SUBSTITUTE FOR THE SPELLING-BOOK?

"False in part is false in whole" is a rule in law in regard to evidence by which lawyers throw testimony out of court. Some teachers have acted on a similar plan in throwing the spelling-book out of the school-room. Because the old spelling-book was wrong in part they discarded the use of the text-book altogether. Now they simply need a reformed spelling-book. If some teacher has the genius to teach spelling without a book, let him collect and arrange his words, giving his order and method of teaching in a text-book, in order that the ordinary teacher may have a guide. The great mass of teachers in this great field of education must have guide-books. A few teachers may be able to teach spelling successfully without a book, but they are few; the majority of teachers fail utterly in their attempts to teach spelling without a text-book on the subject. The great necessity of reform in teaching spelling is a reformed text-book subjected to its lawful purpose. What is most needed is a good method of using a good spelling-book. This is the want of the vast majority of teachers. The cry of "Burn the spelling-book" has done much good in causing new and better books to be made on the subject.

But this cry comes from the extremists. To put the average teacher in a school to teach spelling without a book is like putting a man out to sea in a boat, without a compass, and telling him to steer for the opposite shore, which he cannot see. His journey is aimless; he is lost on the wide waste of waters. So the common school-teacher, without a good spelling-book, is lost in the mid-ocean of thousands of words. His teaching is aimless, drifting to *nowhere*.

It is evident to the careful observer of the tendency of educational reforms "that wherever the experiment of dispensing with the spelling-book has been the longest tried, a decided reaction in favor of the text-book has set in."

Spelling is an essential branch of itself. To teach spelling is a prime duty of the teacher, and not a secondary one. If the teacher attempts to teach spelling as an after-clap to reading, geography,

history, etc., he will most generally make it a secondary work, and the pupils look upon it as of secondary importance, while the minds of both teacher and pupils are absorbed with the subject of the reading, history or geography lesson. Many good lessons in spelling may thus be taught in connection with every recitation, but for a thorough knowledge of words there must be a definite time for a definite study of words. The authors of text-books on spelling are beginning to meet the demands of the times and furnish new and better books.

With a good text-book in hand the teacher wants only to understand the object of spelling and its practical application in the business of life, and he is able to do pretty fair work, and he is on the road to still better work. Spelling embraces the naming of the proper letters in a word; the proper enunciation of these sounds, which may be called articulation; and the proper pronunciation of the word, giving the proper syllabic accent.

The *use* of words should be taught in connection with spelling. There are three ways in which the knowledge of words is applied to the practical affairs of life, viz., in readin or speaking, in writing, and in the use of words.

To meet the first spelling should be taught orally, embracing enunciation, articulation, and pronunciation. The second demands that spelling be taught by writing, that is spelling proper, or putting the right letters in the words. Seldom is one called upon to give the letters in a word except in writing. There are so many letters in English words not sounded that words must be remembered. The third application calls for a study of the meaning of words. Spelling, then, must be oral and written to meet the demands of its practical application. Oral spelling is elocutionary in its results, and aids in reading and speaking.

Writing is the best method by which the child may become familiar with the proper letters of every word, and it must be led to practise written spelling continually. Children must be taught to judge the accuracy of the form of a word by seeing it and writing it.

With the true object of spelling in view the teacher should have a book which contains the essential words of a good vocabulary. The spelling-book should present a series of lessons on the study of these words—they should be arranged in their natural order, presenting in the first lesson those words with which the pupil is most likely to meet first.

While spelling should be a subject of criticism of all written exercises connected with every branch, yet this cannot be made a substitute for the definite daily exercises in spelling, pronunciation, and the use of words as presented in the spelling-book. The text-book in spelling contains a better selection of words arranged in better order than the average teacher can select and arrange. There is perhaps one teacher in ten who can teach spelling without a text-book with some degree of success. Let them do without the books if they can, nine-tenths must have a book. An educator who has spent years of study on the subject, observing the order in which words are needed, and the words which are used; selecting and arranging them in exercises to illustrate their meaning, can give them in a spelling-book to pupils, presenting a more definite and more satisfactory plan of word-study than the ordinary teacher can give them, and at the same time giving the teacher a guide-book, into the application of which he may throw his own individuality.—*Iowa Normal Monthly.*

Teachers, you were well satisfied with the old Monthly School Journal, you will be much more so with the Weekly. Help the new venture.

REMOVING DIFFICULTIES.

BY JACOB ABBOTT.

An effective way to excite interest, and that of the right kind, in school, is not to *remove* difficulties, but to teach the pupils how to *surmount* them. A text-book so contrived as to make study mere play, and to dispense with thought and effort, is the worst text-book that can be made, and the surest to be, in the end, a dull one. The great source of literary enjoyment, which is the successful exercise of intellectual power, is, by such a mode of presenting a subject cut off. Secure, therefore, severe study. Let the pupil see that you are aiming to secure it, and that the pleasure which you expect that they will receive is that of firmly and patiently encountering and overcoming difficulty; of penetrating, by steady and persevering effort, into regions from which the idle and the inefficient are debarred, and that it is your province to lead them forward, not to carry them. They will soon understand this, and like it.

Never underrate the difficulties which your pupils will have to encounter, or try to persuade them that what you assign is *easy*. Doing easy things is generally dull work, and it is especially discouraging and disheartening for a pupil to spend his strength in doing what is really difficult for him when his instructor, by calling his work easy, gives him no credit for what may have been severe and protracted labor. If a thing is really hard for the pupil, his teacher ought to know it and admit it. The child then feels that he has some sympathy.

It is astonishing how great an influence may be exerted over a child by his simply knowing that his efforts are observed and appreciated. You pass a boy in the street wheeling a heavy load in a barrow; now simply stop to look at him, with a countenance which says. "That is a heavy load; I should not think that boy could wheel it;" and how quick will your look give fresh strength and vigor to his efforts. On the other hand, when, in such a case, the boy is faltering under his load, try the effect of telling him, "Why, that is not heavy; you can wheel it easily enough; trundle it along." The poor boy may drop his load, disheartened and discouraged, and sit down upon it in despair. It is so in respect to the action of the young in all cases. They are animated and incited by being told *in the right way* that they have something difficult to do. A boy is performing some service for you. He is watering your horse, perhaps, at a well by the road-side, as you are travelling. Say to him, "Hold up the pail high, so that the horse can drink; it is not heavy." He will be discouraged, and will be ready to set the pail down. Say to him, on the other hand, "I had better dismount myself. I don't think you can hold the pail up. It is very heavy; and his eyes will brighten up at once. "Oh no, sir," he will reply, "I can hold it very easily." Hence, even if the work you are assigning to a class *is* easy, do not tell them so unless you wish to destroy all their spirit and interest in doing it; and if you wish to excite their spirit and interest, make your work difficult and let them see that you know it is so; not so difficult as to tax their powers too heavily, but enough so to require a vigorous and persevering effort. Let them distinctly understand, too, that you know it is difficult, that you mean to make it so, but that they have your sympathy and encouragement in the efforts which it calls them to make.

You may satisfy yourself that human nature is, in this respect, what I have described by some such experiment as the following. Select two classes not very familiar with elementary arithmetic, and offer to each of them the following example in addition:

1 2 3 4 5 6 7 8 9
2 3 4 5 6 7 8 9 1
3 4 5 6 7 8 9 1 2
etc., etc.

The numbers may be continued, according to the obvious law regulating the above, until each one of the nine digits has commenced the line. Or, if you choose Multiplication, let the example be this:

Multiply 123456789
by 123456789

Now, when you bring the example to one of the classes, address the pupils as follows:

"I have contrived for you a very difficult sum. It is the most difficult one that can be made with the number of figures contained in it, and I do not think that any of you can do it, but you may try. I shall not be surprised if every answer should contain mistakes."

To the other class say as follows:

"I have prepared an example for you, which I wish you to be very careful to perform correctly. It is a little longer than those you have had heretofore, but it is to be performed upon the same principles, and you can all do it correctly, if you really try."

Now under such circumstances the first class will go to their seats with ardor and alacrity, determined to show you that they can do work, even if it is difficult; and if they succeed, they come to the class the next day with pride and pleasure. They have accomplished something which you admit it was not easy to accomplish. On the other hand, the second class may go to their seats with murmuring looks and words, and with a hearty dislike of the task you have assigned them. They know that they have something to do, which, however easy it may be to the teacher, is really difficult for them; and they have to be perplexed and wearied with the work, without having, at last, even the little satisfaction of knowing that the teacher appreciated the difficulties with which they had to contend.

ORGANIZATION OF SCHOOLS.

BY SUPT. CHARLES J. CONNOR, BUENA VISTA COUNTY, IOWA.

I. Find out as nearly as possible what has been done by your predecessor, By means of examinations, oral or written, classify the pupils. Be sure to have every scholar in one of the five divisions. If absolutely necessary, have a class of "irregulars," but know where *every student is and have definite work for him.*

2. Do not be too sure that the pupils have not done thorough work as far as they have gone. They are often timid at first with a new teacher and fail to show what they actually know, Remember, it is easy to forget. A few carefully-planned review lessons will doubtless be necessary to bring the classes to the standing they merited at the close of last term. Perhaps this work can be reached incidentally. See by all means that the term's work is one of advancement.

3. Have first organization temporary. Let it be thoroughly understood that there may be occasion to promote or denote. If mistakes have been made rectify them promptly, but wait until it is certain they are mistakes.

4. Seat pupils by divisions when practicable. The little folk especially appreciate advancement by change of seats from primary to middle division. There is something tangible about this advancement that they understand.

5. Have as few classes as will at all meet the demands of the school. Twenty recitations per day should be the very outside limit. No teacher can do justice to more, especially if the classes are large. Sometimes the teacher is compelled to hear more. Do thorough work at all hazards. Alternate one or two of the advanced classes if necessary. A carefu study of the work will often enable the teacher to combine classes by planning a little extra work for the brightest members. Too much care cannot be exercised in the organization of the schools.

Teach the English language. I wish to emphasize this. Reading (and kindred branches studied in learning to read, write and speak good English) and arithmetic are basal branches in our country school work. The "Three R's" are still at a high premium, and should be. Arithmetic will readily command attention. More trouble will arise in presenting English. Make special effort here. Avoid teaching nothing but *rules and diagrams.* To learn to use the English language we must *read it, write it, speak it.* Do this work whether they finish books or not.

Abstracts should be prepared from time to time with great care. The teacher should select some interesting story or incident (not too long), read it to the class or school and question them upon it thoroughly, so that each one shall be able to recall all the principal points. The pupils should then be required to write the story in their own language, using scratch books or common writing paper. Before copying the pupil should carefully revise the work, correcting all misspelled words, observing that capitals and punctuation marks are properly used and that the work is properly paragraphed. When this is done the abstract should be copied upon paper of uniform size. Too much care cannot be taken with this work, for if it is properly followed it will produce great results in the development of language. These also show the pupil's standing.

As helps in language, let the teacher write down all incorrect expressions used in school and give them to the pupils once a week, or, better still, let the pupils pick up incorrect expressions and correct them. We learn to do by doing. Also make skeletons of stories and let the pupils combine the words.

When a class has finished any topic, as multiplication, decimals, percentage, etc., place questions upon the blackboard and give the class a written review of the topic, requiring them to write first upon slates or scratch books, after which the work may be copied upon the paper prepared for this purpose, following the directions for abstracts.

The arrangement of the work on the paper, the penmanship, spacing, etc., should be done in the neatest possible manner. These papers, properly signed, should be handed to the teacher for safe keeping. This should be repeated at intervals during the term. The result will be a fine display of arithmetic work.

The directions given for arithmetic will apply to history and geography; however, I will submit the following outlines for a country or state:—

1. Position. 2. Size. 3. Surface—(*a*) land, (*b*) water. 4. Climate. 5. Productions—(*a*) animal, (*b*) vegetable, (*c*) mineral. 6. Inhabitants. 7. Occupation. 8. Government.

Outline for administrations:—1. Time. 2. President. 3. Vice-president. 4. Political parties. 5. Events. 6. Presidential campaign—(*a*) candidates, (*b*) issues.

Spelling should form a part of every recitation. Ten words are enough for any lesson. Let the words be written, defined and used in sentences.

Each school must have good work done in the English language, arithmetic, spelling and writing. To fail here is to fail utterly. Do not underrate other branches, but teach the above thoroughly. *Simply hearing any recitation is not teaching.*

Teachers cannot do themselves or their pupils justice by letting things go at "loose ends." Study every lesson until you are enthusiastic over it. The pupils will catch your spirit. Work with them. Do not tell them that you will look up answers to their questions and will tell them to-morrow, but work with and show them how to work. Encourage investigation. Do not let the pupils take up the higher branches (history, physiology, etc.,) too soon. They cannot understand the language used, and only waste time. Do good, thorough work.—*Central School Journal.*

Notes and News.

ONTARIO.

Some corrections have been made in the list of successful candidates from Whitby Collegiate Institute, and the record now gives twelve second class certificates—six of grade A. and six of grade B.

The "Executive Board" of Albert College have just decided that the Commercial Department shall hereafter be named and known as "The Belleville Business College," in connection with Albert College. Prof. Swayze is to be Principal.

The Strathroy High School began its fall term with over 150 pupils. This institution has proved a great success under the able management of J. E. Wetherell, B.A.

Mr. M. M. Jaques, Principal of the Public School, has been appointed drawing master for the class to be organized under the auspices of the Perth Mechanics' Institute, at a salary of one hundred dollars for the term. Under the charge of Mr. Jaques the Public School is making rapid and good progress, and we have no doubt his new position will be filled with equal efficiency.—*Perth Courier.*

Mooretown has lost a good teacher by the retirement of Mr. Geo. McIntyre and many feel that it will be a difficult matter to replace him. He left to enter the University of Ann Arbor as a medical student and carries the hearty good wishes of the whole section.

The CANADA SCHOOL JOURNAL for October is an excellent number, and one that should be appreciated by its readers. Besides a large amount of reading of a professional nature, it contains a chapter on mathematics with solutions to questions, and examination papers that will be found useful in every public school. Our Normal School Examination papers and P. E. I. educational notes find a place in its columns. A very practical address given by the Ontario Minister of Education before the Provincial Association of Ontario, is worthy of the attention of teachers. This monthly periodical is, certainly, one that every teacher in this Province should have, as it would tend to increase his knowledge and extend his views.—*Summerside Journal, P.E.I., Oct. 2.*

Mr. Tilley, Inspector of County Model Schools, visited the Peterboro' Model Schools, and expressed himself as highly pleased with the staff and the buildings. The object of his visit was the organization of the school.

Mr. S. Roulston, Principal of the Palmerston Public School, has resigned his position, and Mr. Munro, of Milverton, has been appointed to the place.

Orangeville High School, of which A. Steele, B.A., is headmaster, passed at the last Departmental Examinations, eight second class candidates, nine third class and six intermediate.

Hughes's Manuals continue to be appreciated in the United States as is evident from the following order from the New York Sunday School Association :—

"Please send us six each, 'How to Secure and Retain Attention,' and 'Mistakes in Teaching.'"

Peterboro' Board of Education has decided to charge pupils not resident in the town, a fee of $2.00 for entrance examinations, to defray expenses.

In Sarnia High School, fourteen pupils out of seventeen sent up obtained second class certificates—four grade A. and ten grade B. In addition to these, fourteen passed in third class and nineteen intermediate.

A circular has been issued from the Educational Department, stating that the old regulation by which a teacher who taught three years prior to 1877 might be relieved from attendance upon a Normal school, and the regulation for granting certificates to monitors or assistants are repealed. By this it will be seen that the power the Inspector formerly had of granting permits has been done away with.—*Woodstock Sentinel.*

The Milton County Model School has seventeen candidates for the teaching profession. It is said that there will soon be more teachers than pupils in this county. As it is, a vacant situation of $300 a year will draw out about fifty applicants.

Mr. W. F. Kennedy, public school teacher at Evelyn, who passed at the London examination with honors, has been appointed headmaster in the Thamesford school with a large increase of salary. Mr. Kennedy leaves Evelyn after three years' teaching, very much to the regret of the whole section. Miss Mary Sedmen, of Thorndale, succeeds Mr. Kennedy in the Evelyn school.

Master Thos. McDougall, an ex-pupil of S. S. No. 26, London, who attended the St. Mary's Collegiate Institute for the first six months of the present year, took the Governor-General's gold medal for that institution at the recent second class examination.

The Public Schools in Amherstburg were closed until October 20th, owing to the prevalence of diphtheria.

The Streetsville High School Board, at a recent meeting unanimously passed the following resolution :—"That this Board wishes to put on record their satisfaction with the high standing taken by the pupils at the Departmental Examinations in July, as well as with the character of the general work done in the school during the past year. The members of this Board are satisfied that the teachers, A. B. Cooke and W. J. Galbraith, Esqs., have, by their energy and ability, succeeded in raising Streetsville High School to a prominent position among the educational institutions of Ontario, and wish to convey to them their hearty appreciation of the interest they have and are manifesting in the welfare of this school. Feeling satisfied that the school is ably managed, we trust we may long be able to retain the services of the present staff of teachers."—*Brampton Conservator.*

In Orangeville High School, A. Crichton, B.A., Medallist in Classics (Toronto University), is classical master; Mr. R. A. Gray, Medallist in Physics (Toronto University 1884), takes Physics, Science and Drawing. The latter gentleman passed in all departments in Arts School last holidays. The new High School building will be ready, it is thought, for occupation by New Year.

In the Parkdale Model School, Mr. R. W. Hicks has been appointed teacher of Music and Drawing for the whole school for one day in the week. The building has been enlarged by four additional rooms making fourteen rooms in all, and the completion of this enlargement was celebrated by a very successful concert. The students in training have been organized into a Glee Club with Mr. Hicks as conductor.

Napanee High School reports an attendance 25 per cent. larger than at this time last year, a fact which speaks volumes for the head master, C. Fessenden, B.A., and his efficient staff of teachers. At the examinations of 1884 this school passed two in first class, nine in second, ten in third, eleven in intermediate and five in University matriculation. Total 37, against 24 in 1883, 12 in 1882, 4 in 1881 and 2 in 1880. This is, certainly, notable progress.

Chatham Business College is maintaining a leading position in the Province. Mr. D. McLachlan is principal and proprietor, and his efforts in giving his pupils a sound knowledge and proficiency in all branches of business are highly commendable. We note with pleasure the following :—

"At the late Toronto Industrial Exhibition Mr. McLachlan's exhibit of ornamental penmanship attracted considerable attention. It was one of the prettiest exhibits in the art gallery. The work shown was principally done by pupils of the Canada Business College, that of Willie Roach (aged 15) being an astonishing achievement for one so young. He draws with pen and ink marvellously correct pictures of birds, deer, etc., and it is safe to say for his age he is the finest penman in Canada.'

The following is an extract from Dr. McLellan's report of Perth Collegiate Institute :—

"Accommodation : Fair equipment; four masters; no library; money needed for library and apparatus. Organization : The classification is fair; it might be improved; there is not time enough allowed for the various recitations, especially in languages; what can a teacher do in twenty minutes with a class in Greek? This can be easily remedied.

"The School is doing very fair work. I was well pleased with the Classics, French and Mathematics. Mr. Robertson is a good 'drill' in classics, and, something more, appreciating classics himself; this has a strong influence on his classics. The order is good; arrangement of classes fair; more time needed for classics and recitation. Board should make a grant for library of reference and standard literature."

The several teachers in the Perth Collegiate Institute have been re-engaged at salaries as follows :—W. J. Rothwell, B.A., Principal, $1.200; Neil Robertson, B.A., Classical Master, $800; A. W. Burt, B.A., Modern Language Master, $800; Wm. Moore, B.A., English and Science Master, $600. In the Public School Mr. M. M. Jaques, Principal of the Model School, was re-engaged at a salary of $700; Miss McKinley, $300; Miss Andeson, $275; Miss Smitherman, $225; Miss Neilson, $200; Miss Walker, $200.

The Hamilton Board of Education has adopted the following recommendation, on the motion of Mr. Burton, seconded by Mr. Hill :—That your committee recognizing the importance of a more thorough system of inspection of the public schools of the city, recommend that the services of an inspector who shall devote the whole of his time during school hours be engaged, and with that end in view, Mr. Smith, the present inspector, be requested to resign his position as inspector on January 1st next.

The Education Department has just revised regulations in regard to the examinations for teachers' certificates. Amongst other changes Latin and French are struck off the list of optional subjects, and algebra, drawing, book keeping and physics are made obligatory upon candidates.—*Orangeville Advertiser.*

Mr. Wolverton, who three years ago was appointed Principal of Woodstock College, has now received the appointment permanently. Recent reports show that marked progress has been made in the College financially and educationally.

Hughes's Manuals have met with the most decided success in the United States. "Mistakes in Teaching" seems to be a very popular book among teachers in that country. A letter received, Oct. 23rd, orders quite a large quantity of these books for the teachers of Minnesota.

The "Weekly Canada School Journal" project is warmly endorsed by a large number of friends in the ranks of the teaching profession, and we are encouraged very much by such expressions of approval and promises of support. The following is a sample of many similar communications :—"The weekly edition of the JOURNAL will, I think, be received even more favorably than the still popular monthly edition. As for the latter, however, (were there no weekly) I would not wish to be without it. Expect my subscription to the 'Weekly,'—*our own professional paper.* W. J. C." Thanks, kind friend! Much as you like the monthly Journal you will appreciate the "weekly" still more, for it is intended to spare no effort to make it the best educational paper that has ever been before the public, and to have it just as you mention, "The Teacher's own Professional Paper."

A prominent high school master writes :—"Your words on Botany are well timed. Do not drop the subject till it is again an option for Algebra. It developes girls' minds far faster than Algebra and gives them a liking for investigation."

Mr. Tilley, Inspector of Model Schools, spoke in very complimentary terms of the Picton school on his last visit. He declared that the school was among the best organized and best disciplined model schools in the Province, making no exception of any room. He complimented the model class, saying the students showed that they were working, and made the best class he had ever seen in Picton."—*Picton Times.*

At the recent union convention of teachers, Lambton Co., it was resolved to adopt the plan of uniform promotion examinations for the county.

STRATFORD COLLEGIATE INSTITUTE.

The High School at Stratford was Oct. 24th, promoted to the standing of a Collegiate Institute, the official declaration being made by the Hon. G. W. Ross, Minister of Education. A large number of educationists from Perth and adjoining counties, together with the school trustees, local clergy and other friends, assembled to do honor to the occasion, and it is estimated that 1000 persons were present. The walls of the various rooms were festooned with evergreens, flowers, flags, &c., and adorned with paintings and drawings, the handiwork of the students under Miss Freeman's charge.

In his address the Minister referred to the splendid work that had been done in the school by W. McBride, M.A., and his able assistants, which had won the honor that was about to be conferred on it. The staff during the present year had increased from four to eight; the average attendance has gone up from 90 to 177. At last departmental examinations, 8 passed in second class A, 8 in B, 14 third class and 35 intermediate. At the "Local Examinations for Women" in connection with Toronto University, 29 candidates passed, out of 32, obtaining 12 First Class Honors and 11 Second Class Honors. It is proposed to add a Commercial Department as an optional subject for High Schools, and also Drawing. Arrangements would be made next year by which male students in High Schools could write for the matriculation of Toronto University at home the same as women are allowed to do at present and save them the trouble and expense of going to the city. The Hon. gentleman's remarks were received with much satisfaction. Mr. J. L. Hughes, inspector of city schools, Toronto, gave a brief, humorous address. Messrs. Rothwell and McCallum B.A., both of Listowel, made some appropriate congratulatory remarks. On the motion of Rev. G. Richardson, seconded by Rev. D. A. McGregor, a vote of thanks was accorded the speakers. The boys were then put through their facings in drill exercises and the girls in calisthenics.

In the evening a banquet was tendered to Mr. Ross. Mr. Thos. Stoney, Chairman of Trustees, was in the chair, and a very agreeable time was spent.

The teaching staff of Stratford Collegiate Institute comprises the following :—Wm. McBride, M.A., Mathematics and French; C. A. Mayberry, B.A., Classics; J. Wilson, B.A., 1st A., English; John M. Moran, 1st A., German and Nat. Science; A. DeGuerre, B.A., Mathematics; Prof. Johnson Morriss, Vocal Music; Miss J. Weir, Instrumental Music, and Miss M. Freeman, Drawing, Painting, &c.

The capacious building affords spacious accommodation, and a library, gymnasium, calisthenic room and laboratory have all been started and well equipped since last January. The Board of School Trustees has heartily co-operated with the head master in furnishing the school with apparatus and appliances and as a result the Institute is now one of the leading schools in the Province. Mr. McBride, on his appointment, found the school in a disorganized state, but by the energy and indomitable perseverance for which he is noted, he has brought the Stratford Collegiate Institute to the high position it occupies to-day.

We are in receipt of the "Annual Circular" of Ontario Business College, Belleville, and have to congratulate Messrs. Robinson and Johnson on the flourishing state of the institution. The varied branches of commercial education taught in the College and the practical nature of the teaching afforded by men who are second to none in the profession, have attracted students from the United States, West Indies and Newfoundland, besides a large attendance from the provinces of the Dominion. Not long since we gave a full description of the method by which each subject is taught, namely, by actual business transactions in banking, counting-house work, telegraphy, &c., carried on in such a manner that a student may step from the College into a business house and proceed with his work without further training. The success of the large majority of the pupils who have graduated from the College is the best evidence of the superior education afforded within its walls.

Mr. W. H. Bean, teacher of Scarboro' Village School, has matriculated at Trinity College, Toronto.

An effort is about to be made to organize a Teachers' Association for South York. A meeting of the teachers of the inspectorate is to be called to assemble in Parkdale Model School some time this month, at which the project will be disscussed.

NEW BRUNSWICK.

The Board of Education has had several meetings recently, but the result of the deliberations have not transpired. It is understood that the determining of Inspectoral Districts and the appointment of Inspectors has been a part of the work.

The following Text Books have been prescribed for use in the Free Schools of the Province on and after November 1st, 1884 :—Hamblin Smith's Geometry; Modern Geography and Atlas (Canada Publishing Co.,) in place of Calkin's School Geography of the World; Archer's Short History of Canada.

Classes beginning any of these subjects must use the newly prescribed texts; but classes which have already made some progress in the subjects may, with the concurrence of the Trustees, continue the use of the present Texts.

The following provisions are prescribed respecting Superior and Grammar Schools :—

SUPERIOR SCHOOLS.

Teachers of a Superior School to be entitled to the Provincial Allowance of $250 must hold a license from the Board of Education of at least Class I, and must receive from the Trustees a salary of not less than $250 per annum.

1. *Superior Schools in Cities, Incorporated Towns, and in Towns having four graded Departments.*—Boards of Trustees shall provide for giving instruction in at least Standards IX and X. When instruction is not provided for or not given in advance of Standard X, work in Standard VIII may be required of the Teacher, provided the daily average attendance of pupils in the higher standards is not more then 25. Should Standards IX, X and XI be taught no work in lower standard shall be required of the teacher, unless a Provincial Licensed Assistant is employed having a separate classroom.

2. *Superior Schools in Towns or Villages having three Graded Departments.*—The highest Department shall constitute the Superior School, and shall not be called upon to perform work under the Standard VII of the graded course. Provision shall be made for giving instruction in a course specially provided for such schools, to extend over a period of three years.

3. *Superior Schools in Districts having two Graded Departments.*—The second or highest Department shall form the Superior School and shall not be called upon to perform work under Standard V of the graded course. A special course extending over a period of four years shall be prescribed for such schools.

4. *Superior Schools in Districts having no Graded Schools.*—An ungraded school in a country district may be recognized as a Superior School, provided a class room Assistant is employed if the daily average attendance of pupils is 30 or upwards. For such schools a special course will be prescribed.

5. The school accommodation and appliances in all Superior Schools must be satisfactory to the Inspector, who shall report thereon to the Chief Superintendent.

GRAMMAR SCHOOLS.

The Master of a Grammar School must hold a Grammar School License from the Board of Education and be in receipt of an annual salary of at least $350 from the Board of Trustees, to entitle him to the Provincial grant of $350.

1. *Grammar Schools in the Cities of Saint John and Fredericton.*—(Specially provided for.)

2. *Grammar Schools in Towns.*—Grammar Schools in Towns having a graded course shall make provision for giving instruction in not less than two standards in advance of Standard VIII, and must have competent pupils studying in at least Standard IX. If there are no competent pupils engaged in the study of Standard X, the Board of Trustees may place pupils in Standards VII and VIII, but not in a lower Standard, under the immediate instruction of the Grammar School Master.

Should there be competent pupils engaged in the study of Standard X, and the whole number of enrolled pupils exceed 30, the Board of Trustees must either relieve the Master from teaching Standard VII, or employ a licensed assistant.

If Standard XI is provided for and if competent pupils are engaged in its study as well as pupils in Standards IX and X the Board of Trustees shall not exact from the Master work in any lower Standard unless the enrolled number of pupils falls below 25. If the enrolled number of pupils falls below 25, the Grammar School Inspector shall determine what additional work, if any, shall be assigned to the Master.

It shall be competent for the Trustees of any Town or Grammar School to require the Master to teach Latin to pupils who may belong to grades VII and VIII, in another Department, provided the Teacher of these grades is not qualified to teach the subject.

3. *Grammar Schools in Villages.*—When a Grammar School is established in a village having two Departments, the highest Department shall be considered the Grammar School. For such a department a course of Instruction in advance of Standard IV of the graded course shall be prescribed, embracing four consecutive Standards. Classics and Mathematics shall be included in the course. Should no competent pupils be engaged in the study of either Classics or Mathematics in advance of Standard VI of the course within the third term after the First of November, 1884, or should at any time thereafter one year elapse during which no pupils have been engaged in such studies in advance of this Standard, the school shall fall below the rank of a Grammar School.

If the full course of instruction is not in operation, and if the number of pupils is under 30, the Inspector shall determine what additional work, if any, may be required of the Master.

4. The school accommodation and appliances must be satisfactory to Grammar School Inspector, who shall report thereon to the Superintendent.

The following orders were made by the Board of Education, June 10th, 1884 :—

1. The Inspector may issue an Assistant's License of the Third Class, to be of force during the School Term for which it is issued, to any person qualified to act in the capacity of a Class-Room Assistant in an ungraded school having fifty pupils or upwards, but shall not *renew* the same without the special permission of the Board of Education or Chief Superintendent. Such license shall be valid only in the School for which it is issued, and shall not qualify the holder to act in any other capacity than that of Class-room Assistant. Every license issued hereunder shall be at once reported by the Inspector, with the designation of the school, to the Chief Superintendent.

2. When a licensed teacher *cannot* be obtained by the Board of Trustees of a school district *or* recommended by the Inspector, he may, until otherwise ordered, issue a license of the Third Class to any suitable person to teach the school in such district for *one* term, but shall not *renew* the same or any license issued by him, without the express permission of the Board of Education or Chief Superintendent. Any license issued hereunder shall be at once reported to the Chief Superintendent.

The Chief Superintendent attended Northumberland County Institute, at Chatham, and gave a public address on educational matters, referring particularly to the recent changes in the Law and the Regulations.

All the Grammar Schools provided for by the amended law passed last winter will go into operation this term, as applications have been made to the Department for the Provincial Grants on the terms prescribed.

It is expected that a large proportion of the new Superior Schools contemplated by the Law will be established this season.

The dedication of the new Memorial Hall in connection with Mount Allison College, Sackville, took place, with appropriate ceremonies, on the 10th October.

The site for the new buildings for the Baptist Seminary, St. John, N. B., has not yet been finally decided upon.

H. V. B. Bridges, A.M., lately Principal of the Church Hall Schools, Fredericton, is now on the staff of the Collegiate School. So is B. H. Foster, A.B. It is said that important changes are to be made in the constitution of the school.

W. F. Ganong, A.B., has taken a school at St. Stephen, in room of Jas. Vroom, who goes to Presqu'isle.

J. A. John, B.A., has resigned the principalship of the Sunbury Grammar School, in order to study for the ministry, and R. G. Day, B.A., from Andover, has been appointed to succeed him.

Miss Ross is at present in charge of the schools vacated by Mr. Bridges, at Fredericton.

J. J. Weddall, Esq., is the successor of the late S. D. McPherson, Esq., as Trustee of Schools in Fredericton.

In the Sussex Schools, Mr. Flewelling has resigned the Principalship, and Miss Murray and Miss Armstrong have been promoted to higher departments.

NOVA SCOTIA.

Quite a number of changes in the principalship of county academies and High Schools have been reported. Mr. Daniel Murray, A. B. (Dalhousie) assumes charge of the Shelburne Academy at the opening of the ensuing school year. He succeeds Mr. H. McIntosh, who has accepted an engagement from the trustees of the County Academy at Lunenburg. Mr. F. Jones, A. B., (Dalhousie) takes the principalship of the Victoria County Academy at Baddeck, C.B.

Under the judicious direction of Supervisor McKay, the Board of School Commissioners for Halifax city have remodelled their educational system in some important particulars. Most, if not all, of these changes may be unhesitatingly accepted as improvements. Among matters mooted, but not yet practically carried into effect, may be mentioned the popularization of the High School by abolishing fees and bringing the institution into closer accord with the Provincial system of education. Of late the Halifax staff of Public School Teachers has received some valuable accessions.

The revised regulations of the Provincial Normal School entrance provisions whereby pupil-teachers entering with exceptionally high non-professional attainments may complete the curriculum for second class licenses in May, instead of waiting till the end of the annual session in July. The Preparatory Department for third class teachers, which made a hopeful beginning last year, continues in operation. Miss Ada Ryan, of Halifax, who has been placed in charge of it, achieved the high distinction of leading the candidates for first class licenses at the recent Provincial examination.

The sixth annual meeting of the Teachers Association for Inspectoral District No 8, (counties of Inverness and Victoria), was held at Baddeck on the last Thursday and Friday of September. A large number of teachers and visitors attended the several sessions. Papers on various subjects, and all marked by much ability, were read by the President of the Association, J. Y. Gunn, Esq., In-

spector of Schools, Mr. D. C. McLennan, Mr. McKenzie, and Mr. Forsyth, Miss Forbes (who is an undergraduate and exhibitioner of Dalhousie College) gave an instructive class exercise in the shape of a lesson in Geography and History as taught by the daily newspaper. The proceedings were enlivened by educational discussions and addresses from the clergy and other gentlemen present. The local paper refers in warm terms of praise to the paper read by the President, Inspector Gunn. Mr. L. C. Boyd filled acceptably the position of Vice-President, and Mr. D. H. McKenna that of Secretary-Treasurer. It is a melancholy proof of the uncertainty of human life, that the esteemed Vice-President, Mr. Boyd, was drowned on the Monday following the meeting of the Association, as he was returning by sail boat to his school on Boularderie Island.

Next month's notes will contain reports of the recent Teachers' Associations at Sydney, C.B., and at Kentville.

The next ensuing annual session of the Provincial Normal School begins on the 5th inst. There is a good prospect of the attendance outstripping that of any previous year.

BRITISH COLUMBIA.

We have had the pleasure of seeing a very neat and appropriate, though cheap, design of a Diploma issued by the Superintendent of British Columbia to present to pupils passing the Entrance Examination to the High School. It is of a convenient size and is suitable for framing. The motto is "Haec olim menunisse juvabit." It will delight in after years to remember these things. It bears the signatures of the Supt. of Education and the headmaster with the seal of the Department attached, and no doubt will be highly prized by the winner. It appears to us that this will produce a healthy stimulant to the pupil who will take pleasure in preserving such a document. We would suggest that Ontario pupils might value a similar Diploma much more highly than the present "slip of paper," that "does for the purpose."

The lowest salary paid to teachers in British Columbia is $600 a year while many receive sums ranging from $960 to $1320. It is simply humiliating to know that Ontario teachers, who devote much time and money to secure the necessary training, receive only a mere pittance in comparison, and work from an hour to an hour and a half longer each day, and have a much larger class as a rule. The Government fixes the salaries according to the *school* and there is no competition in salaries. If trustees imagine that when they engage a teacher for $300 they are receiving $500 worth they are in all probability mistaken. Do they make a practice of giving two dollars' worth for one dollar?

The number of schools in British Columbia is eighty-five. The increase during the past year has been over twenty per cent. This speaks well for the interest the people are taking in education, which, no doubt, has been greatly stimulated by the popular official head.

We are pleased to notice the efforts that Mr. Pope is making to to establish a teachers' convention. Such an association cannot fail in good results to those who partake fully of its advantages and we trust every teacher will hasten to put a shoulder to the wheel. We no not want any drones, remember!

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

PROVINCIAL TEACHERS' ASSOCIATION.

THIRD DAY.

ONTARIO—*Continued*—The Public School section of the Association met, Mr. Duncan in the chair. On motion it was resolved that it is the opinion of the Public School section that the holidays in rural sections be six weeks, by Departmental regulation, instead of being as at present optional with trustees.

Mr. W. G. Duff moved, seconded by George Baird, That in the opinion of the Public School section of the Teachers' Association the history for entrance is too extensive, and would recommend that the history for entrance be Canadian history, and one period of English history, to be set by the department from time to time. The motion was carried.

Mr. F. C. Powell, of Kincardine, read a paper on reading and writing, in which he maintained that although the importance of these subjects was generally acknowledged, sufficient attention was not paid to them in our school training, and that in some High Schools they were almost ignored.

Considerable discussion took place on a motion made by Mr. Alexander that in the opinion of this section the action of the Hon. Minister of Education in recognizing and placing a high value on the professional success of candidates for re-examination for third-class certificates is calculated to foster and promote that most essential part of a teacher's qualification, and that the recognition of the value and importance of successful work in the school-room should be extended to the higher classes of certificates, so as to make it possible for a teacher through success in teaching to raise his certificate from one degree to another in that class in which it belongs. An amendment offered by Mr. Barber, advocating the entire separation of the professional and the non-professional examinations was lost on a division, and Mr. Alexander's motion was carried.

Dr. Forest, of Bradford, explained the working of an ingenious machine called the "word builder."

The following officers were elected:—Chairman, Mr. Munro, of Ottawa; Secretary, F. C. Powell, Kincardine. Directors—Messrs. Wood, Steel, Deacon, and Coates. Legislative Committee—Messrs. R. W. Doan, Hendry, and Rannie.

The High School section recommended a more thorough study of botany.

In the afternoon—Mr. Scarlett presented the report of the Temperance Committee. The committee having duly considered the circular addressed to this Association by Messrs. Orchard, of Owen Sound, secretary of the Canada Temperance Union for Ontario, reported that the matters referred to them have been for some time and are still under the consideration of the Education Department, and that when finally settled their decision will no doubt be satisfactory to all concerned. The report was adopted. The Audit Committee's report was adopted. The election for President then took place by ballot, and Dr. McLellan was elected.

HIGH SCHOOL SECTION.

The High School section met in the library, with Dr. Adam Purslow in the chair. Principal McHenry read a paper on High School graduation. The plan proposed was that on the completion of the full course in a High School or Collegiate Institute pupils be regularly graduated, receiving a diploma issued by the Minister of Education, and that the bestowal of this honour take place at the annual public meeting of pupils, parents, and other friends of education. He suggested two means of carrying out this scheme: 1st. To have a final examination, conducted under the direction of the Education Department, take place in connection with the intermediate or teachers' examination; graduation exercises to be held in July or September. 2nd. Instead of establishing an additional departmental examination utilize the existing University Local Examinations. Let the upper limit of the High School course, as now, correspond with that of Senior Matriculation, and have our High School candidates for graduation take either the Junior or the Senior Local Matriculation Examination, according to their degree of advancement in the course.

The section passed a resolution approving of the plan of Upper School graduation, and suggesting that the local university matriculation examinations could be utilized, and appointed a committee consisting of the High School representatives in the University Senate and Messrs. Bryant, McHenry, and Embree to prepare a scheme.

On motion of Mr. Miller it was resolved that the University of Toronto be requested to recognize as fully matriculated students all who at the local examinations shall obtain the standard required for matriculation and who in these subjects comply with the conditions of entering the University.

The committee appointed to consider the subject of natural science for junior matriculation recommended that a paper be set therein demanding from candidates such a knowledge as must be obtained from personal observation of Canadian plants, also a paper on physical geography, meaning thereby the scientific treatment of the upper portion of the earth's crust, the atmosphere, snow, ice, rain, hail, winds, clouds, etc.

As a result of this report the section resolved that the subject of botany and chemistry or chemical physics be placed as optional subjects on the junior matriculation curriculum.

Dr. Purslow moved, that in view of the objectionable nature of some of the papers set at the last matriculation examination of Toronto University, notably the pass papers in mathematics, the High School representatives to the Senate be requested to endeavor to have none but suitable persons appointed as examiners, and to this end to secure that one examiner shall be a professor of the subject examined on, and that another, if possible, a high school master, conversant with the capabilities of High Schools. (Carried.)

The committee on Mr. Bryant's paper on Commercial Education reported in favor of recognizing the claim of pupils who did not desire preparation for professional examinations, and recommended a course of commercial education, comprising the subjects mentioned by Mr. Bryant, with the addition of phonography as an optional subject.

On motion the department was requested to select as sub-examiners high school masters and other teachers of practical experience.

The following officers were elected:—Chairman, Dr. Purslow; Secretary, Mr. Merchant; Executive Committee, Messrs. Strang, Embree, MacMurchy, Miller, and Robert Alexander; Legislative Committee, Messrs. Bryant, Scott, and Wetherell.

INSPECTORS' SECTION.

In the Inspectors' section, amendments to the school law were considered. The section expressed its opinion that summer vacations in rural districts should be six weeks long; that the nomination and election of Public School trustees in cities and incorporated villages should be held on the same day as the nomination and election of municipal councillors, and in the same place; that the number of trustees of rural school sections be increased by two, and that the same be five instead of three, also that each trustee hold office for five years; that it be compulsory in trustees to pay their teachers quarterly; that the expenses of all examinations, except entrance examinations, in connection with the public educational system, be provided for by fees to be paid by candidates; that it should be incumbent upon County Councils to provide and levy $50 towards the local teachers' institute; that section 186 of the School Act should be changed so as to remove all doubt in regard to its being compulsory on County Councils to provide for the travelling and other official expenses of Public School Inspectors.

The section elected the following officers:—Chairman, A. Campbell, Kincardine; Secretary, F. L. Michell. Directors—Messrs. Fotheringham, McKinnon, Clapp, and Hunter. Legislative Committee—Messrs. Maxwell, Smith, and Little.

A committee consisting of Messrs. McMurchy, Alexander, and McKinnon, was appointed to report next year on the consolidation of the constitution and by-laws of this Assembly and the amendment of them so far as they relate to the election of officers.

Col. F. W. Parker delivered an address on the Teaching of Reading and Language in Schools. He said that the maxim "learn to do by doing" had been disregarded. Reading was not talking. The child had learned to talk before he came to school, in fact all great elocutionists said, "If you will learn elocution, go to a little child." The child's pronunciation and articulation might be imperfect; its emphasis never. The lecturer imitated the dull, monotonous tone in which a child reads after a few months' training at school, and said it was something between a whine and a groan. Reading was not pronunciation. If pronunciation had to be taught, it was something quite separate from reading, nor did reading consist of articulation or emphasis, both of which the child had learned before coming to school. He defined reading as a means of getting thought by means of written sentences. Reading was thinking by means of written words. If the child did not think he did not read. The great mistake committed had been to make expression the end of education, whereas power should be the end and expression the means. As frequently taught, oral reading, instead of a means to make the child think, was actually an obstacle between the child and the thought. A faulty system was the old A, B, C method of teaching the alphabet. Another was the phonic system, as sometimes taught, and another was elocution, in which children were taught to make strange and unnatural noises. He strongly condemned the system under which children were made to read the same book again and again, after they had learned its contents by heart. Take this question of polluting literature. Why did children read it? Because they were starved in the school-room on this miserable rubbish. He would throw away the spelling-books, the grammars, the primary geographies, and buy a library for every school-house in America.

Mr. Hughes presented a report recommending that industrial drawing be made compulsory in Public and High Schools, and that marks in drawing be taken into account the same as those in other subjects at the entrance examination to the High Schools; also that industrial occupations be introduced into the Public Schools, especially in the junior classes; and that the Minister of Education be requested to provide such training in Model and Normal Schools. The report was adopted.

Dr. Carlyle read a paper on "Uniformity of Text Books." He expressed himself in favor of uniformity, and suggested that a series of readers be used which would contain one complete English classic instead of scraps without beginning or end.

Mr. A. P. Knight, Kingston, read a paper on "University Consolidation and State Aid to Colleges." He suggested that a certain amount of aid should be given to all colleges which fulfilled certain requirements.

In the evening Col. F. W. Parker delivered an address on "The conflict of two ideals in education." He said that throughout all history two ideals had governed human action. One was that of fore-ordination—man's fore-ordaining what man should be. Whether for good of man, or for selfish purposes, the rich and powerful had fore-ordained what a great portion of mankind should be, either by educating them or by keeping them in ignorance. The question to be solved was, "How to make the best subject." The usual way was to keep the people in ignorance. Some nations had adopted a different mode, namely, to educate the people. Among these was Prussia, whose sovereigns had acted on the principle of making their subjects good soldiers and artisans. As soon as education was introduced then began the conflict between the two ideals—one that the subject was made for the king, and should be educated accordingly; the other, that a man should make the best of himself that he possibly could. The other ideal was that of freedom—the development of the mind into truth. The outward battle might give liberty, but only the inward struggle gave men freedom. The ideal of freedom was opposed to that of limitation. With the American republic was founded the first absolute condition of liberty, but not of freedom. The fathers of the republic in their wisdom founded the common school. Even at this day there was no common school system in the world except on this continent. The schools of Germany were not free; there were free schools for the poor, but the others were "stratified," and stratified schools meant a stratified society. One great end of education was to have the rich mingle with the poor on the same benches and fight them on the same playground. Under the idea of limitation the child was for the course of study; under the ideal of freedom the course of study was for the child. No subject should be included in the course of study which did not develop the child's mind. And in order to know what subjects to select they must study the child's mind—not only the working of the mind generally, but the individual mind of each child. There was no college for the training of teachers, properly speaking. Normal Schools were doing magnificent work, but they had been to a great extent nothing but academies. They had been obliged to receive children who were not yet ready to learn to teach. Make expression the means of thought and the teacher could not go wrong. Shakespeare, and Bacon, and Locke knew nothing of grammar. The speaker also attacked the system of promotion examinations. There should be examinations, but they should be made by the teacher, and made every hour.

Mr. H. I. Strang, after referring to a previous discussion on the respective merits of the system of a Minister of Education and Superintendent of Education, moved that, in view of the change that has taken place since the question was brought before the Association and the general feeling throughout the country that the new Minister should have a fair trial, it was inexpedient to discuss the matter further at present, but that it was desirable that the head of the department, whether Minister or Chief Superintendent, should have a regularly constituted Board of Advisers, representative in character, with specific duties defined by statute.

Mr. McMurchy introduced the subject of Bible reading in schools, and a committee composed of Messrs. Doan, McMurchy, and Wadsworth was appointed to urge on the Government the views of the Association as expressed at the last convention.

The convention then adjourned.

PRINCE EDWARD ISLAND.—The annual convention of this Association was held in the Upper Prince Street School, Charlottetown, Oct. 8th and 9th, and was the largest ever held. A number of visitors also attended and took a warm interest in the proceedings. The President, Mr. D. Montgomery, Chief Superintendent of Education, called the meeting to order at 10 a.m., and after the disposal of some routine business, Mr. McPhail read a very interesting paper on "The Artificial in Teaching." His idea of the profession was not in accordance with the views of many of his hearers, as he considered the teacher bound by the code of instruction to pursue a fixed course instead of acting on what he conscientiously considered the best for his pupils. On the motion of J. F. Mellish, M.A., seconded by Mr. Larkin, the thanks of the meeting was given Mr. McPhail. Mr. Neil McLeod read a good, practical paper on the Teaching of History. He recommended a general outline of the subject, taught topically, instead of the dry bones usually given in the shape of dates, genealogies, and other interesting details. In the animated discussion that followed some valuable suggestions were given by Miss Snaddon, Rev. W. B. King, principal of St. Peter's school; Miss M. Lawson, Messrs. Mackenzie, McLennan, Stewart, Larkin, and Mellish.

In the afternoon Mr. N. McLeod read the report prepared by a committee appointed at last year's convention on the course of instruction for public schools. After discussing it clause by clause it was amended somewhat and adopted. In effect it is as follows:—1. No change in first three grades. 2. No text-book on grammar to be used until pupils enter fifth grade, or intermediate course; in fourth grade the term "musical notation" be substituted for "theory of music." 3. Latin to be commenced in High School course only, in seventh and eighth grades; and that the knowledge of Latin now required of the fifth and sixth grades be deemed sufficient for the seventh, and that of the seventh sufficient for the eighth. 4 Algebra to be taken up in High School grades only; for the seventh to simple equations, and for the eighth to quadratics. 5. That the study of Greek in the public schools be left optional. Miss Snaddon read a well written and thoughtful paper on "What a High School ought to be." Her plans, if applied to the local schools, would be productive of much benefit. Mr. J. L. Robertson, of Toronto, gave an address on Primary Reading, which was well received. He recommended the phonic system combined with the "word method." Mr. J. McSwain, head master of the Model School, read a very practical paper on the teaching of Grammar. He advo-

cated its being taught in the intermediate grades because many of the children leave school when they pass out of these grades. The subject was well discussed by Profs. Anderson and Mellish and Messrs. McLellan, Larkin, Curran, Stewart, and McPhail. The public meeting in the evening was held in the Assembly Hall of Prince Street School, and was largely attended. Mr. Montgomery occupied the chair, and opened the proceedings with a brief speech. Short addresses were then given by Rev. Mr. Nicholls, of Montreal; Rev. Mr Richardson, of St. Eleanor's; Rev. G. W. Hodgson, Hon. David Laird, D. Farquharson, Esq., M.P.P., and Mr. J. L. Robertson. Between the addresses a choir, composed of about 100 pupils of Prince Street School, ably led by Miss E. Barr, sang a number of nice songs. Miss McLeod presided at the organ. The first business on re-assembling the following morning was the appointment of a committee on nomination of officers for the ensuing year, after which Mr. Larkin brought before the convention the importance of attending to some of the suggestions given in the speeches of the previous evening; namely, more effective inspection of schools, better adornment of school-rooms and premises, and the cultivation of polite manners among the pupils. He then handed in a motion to the effect that the school year should commence 1st November instead of 1st July, and the annual meeting of the ratepayers be held the third Tuesday in September. He gave many sound reasons for this change. The motion was seconded by Mr. J. McSwain, and after a lively discussion, in which Messrs. J. Arbuckle, J. M. Duncan, Clay, and Stewart took part, it was carried and ordered to be submitted to the House of Assembly with a memorial praying that the change be made. Mr. McGrath read a paper on "Our School Teachers," in which he showed how some teachers fail in their work, and gave a few excellent practical hints for their guidance. He complained of the smallness of salaries compared with the importance of the work. Miss E. Barr read a splendid paper on "The Teaching Profession," which was highly appreciated. Rev. J. Burwash expressed his satisfaction at the nature of the papers read. A discussion arising out of Mr. McGrath's paper relative to increase of salaries was then carried on for some time by Miss M. Lawson, Messrs. J. D. Seaman, Larkin, N. McLeod, and Alex. McDonald, but no action was taken. In the afternoon the president announced that 146 members had joined the Association. This number was the highest yet obtained. The Committee on Resolutions brought in the following: —(1) "Believing that the use of a school magazine would help teachers in their practical work as well as improve their knowledge of educational matters generally, Therefore resolved, that this Association endorses the CANADA SCHOOL JOURNAL as the educational organ for the teachers of this province, and that the members use their influence to promote its circulation." (2) "Whereas, it has been brought to our notice that after the expenses of the Association have been met a considerable surplus will remain in the hands of the treasurer; and whereas this surplus should be expended so as to be most beneficial to the members of this Association, therefore resolved, that said surplus be expended in the purchase of books with the view of establishing a library." The first resolution was carried unanimously; the second was, on the motion of Mr. Larkin, seconded by Mr. McDougall, held over for a year. The election of officers was then proceeded with. The Committee on Nominations had named Mr. Montgomery for president and Mr. J. D. Seaman secretary-treasurer, but these gentlemen having declined to act, the committee brought in another report, which was adopted as follows:—President, Mr. J. McSwain; Vice-Presidents, Misses Snaddon and Cunningham, Messrs. N. McLeod and P. Curran; Secretary-Treasurer, Mr. R. E. Gaul; Corresponding Secretary, Miss E. E. McKinnon; Executive Committee, Miss Barr, Messrs. J. D. Seaman, D. Gallant, and E. Stewart. Mr. McSwain then took the chair and briefly thanked the members. Mr. Larkin proposed a vote of thanks to the Chief Superintendent for the successful manner in which he had worked up the Association while president for five years; seconded by Mr. Gallant, and carried enthusiastically. On the motion of Mr. Mellish, seconded by Mr. N. McLeod, Mr. L. Miller, the retiring secretary, with other outgoing officers, received the hearty thanks of the Association. Mr. T. A. Le Page gave a lucid and instructive paper on Composition and Analysis, which was discussed by Rev. D. McNeill, Prof. Anderson, Messrs. N. McLeod and A. McDonald. After a vote of thanks was given to the railway authorities for reduced fares, and another to the city school trustees for the use of the school-room, the convention adjourned. In the evening another public meeting was held, and every available space in the hall was occupied. Mr. McSwain presided, and a very enjoyable time was spent. The Lieutenant-Governor honored the meeting with his presence. The following programme was well rendered:—Instrumental solo, Miss Harvey; reading, Mr. T. A. LePage; song, Miss Clancey; reading, Miss McKinnon; song, Mr. A. P. McLellan; reading, Miss Wade; vocal duet, Miss Barr and McLeod; song, Miss Harris; reading, Miss E. Lawson; song, Miss McDonald; reading, Miss Barr; French song, Mr. D. Gallant; song, Miss McLeod; address, Rev. J. M. McLeod; address, Lieut.-Governor, Hon. A. A. McDonald; recitation, Mr. A. G. McDonald; finale, Auld Lang Syne.

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SOUTH GREY.—At the Grey county convention held in Durham, Oct. 16th and 17th, there was a good attendance and a keen interest was shown in the subject under discussion. Mr. J. Winterborne gave an illustration of teaching a language lesson to a class of young pupils. Dr. Gun took up his subject "Dieteties." The essayist showed that the race is deteriorating, especially in large cities, where families often disappear after the third generation. In answer to several questions asked by Mr. Winterborne and others, the Dr. advised teachers to take only a lunch at noon and have dinner after the labors of the day were over. He also urged the necessity of physical exercise and recommended a walk of at least five miles a day. Mr. H. C. Rose discussed Teachers and teaching. His address was eloquent and practical. He believed that teachers leave the profession because they are so poorly remunerated—they are literally starved out. He advises a united effort to increase their salaries. A lively discussion followed in which Messrs. Thompson, Dixon, Campbell and Winterborne took part. Dr. Hixon supported the system of uniform promotion examinations. Among their advantages he mentioned the following:—1st. They form a sure and perfect basis for classification. 2nd. They prevent undue promotion. 3rd. They afford an incentive to work. 4th. They train pupils to pass future examinations. 5th. They excite public interest in the school. Some slight disadvantages were also mentioned. The uniform system of promotion was approved of, by the convention. In the evening a musical and literary entertainment was held, at which a very pleasant time was spent. The following day there was some discussion on the question of Township Associations. A committee was appointed who reported favorably of holding Township Associations. A second committee was appointed as follows for selecting the time and places of first meeting of the local associations and arranging programme therefor:—Artemesia—Monroe and Dixon: Bentinck—Nelly and Bell; Egremont—Sharp and Reid; Glenelg—McDonald and Binnie; Normanby—Ramage and Campbell; Osprey—McKay and Chant; Proton—Rundie and Gillespie. Mr. C. Ramage, delegate to the Provincial Association, read his report, which gave the essence of all the proceedings in expressive and apt language. A question on Corporal Punishment gave rise to quite a long discussion, in which Mr. Winterborne stated that there is no child living but can be won over by kindness, and when a teacher has to punish at all, the cause can be traced to some failure in himself as a teacher. Many of the teachers expressed a different opinion. Mr. J. S. Campbell gave an address on drawing in which he showed its great value as a means of training the hands and eyes. Mr. Jas. Binnie read an interesting paper on "Encouragements and Discouragements of Teachers." The essay was humorous and instructive. David Grier gave a carefully prepared address on "Public Opinion," in which he showed its great power for evil when not properly directed. Mr. Winterborne gave some valuable information about teaching grammar, arithmetic, and geography. He pointed out what should be taught to each class in these subjects. He also illustrated the best method of teaching arithmetic to very young pupils. Mr. Winterborne recommended to teachers the following works, as helps in the study of English:—Earle's Philology, Ayer's Orthoepist, and Whitney's Elementary Lessons in English. The meeting adjourned to meet at Flesherton on 28th and 29th May, 1885. This has proved one of the most useful and best attended meetings of the Association, about seventy teachers being present each day, besides several visitors from Durham and vicinity, prominent among whom were Revs. Forest and Park.

DUFFERIN.—The Dufferin Teachers' Association met here on the 10th October. The first session was opened with prayer by Rev. Mr. Sherran, M.A., at 9:30. The minutes of last session were then read and adopted. Miss Cameron took up the subject of dictation but not having a class at her disposal her subject was withdrawn in order to procure a class. The subject of syntactical blunders was taken up by Mr. Crichton, B.A. He illustrated the subject by several examples. The second session was opened by the minutes of last session being read and adopted after which the subject of dictation was taught by Miss Cameron and criticised by Misses Anderson and Jelly and Mr. Acheson and Mr. McLim. The president then gave an able and excellent address in which he dealt largely upon "Superannuation fund. The Hon. G. W. Ross, Minister of Education, was presented with an address of welcome signed by the president on behalf of the Association after which the Hon. Minister gave a lecture on how "reading" should be taught in our schools. The second session was concluded by a lecture on elocution given by Miss Churchill. The third session was opened with prayer by Mr. McCormack. Mr. McArdle gave his method of teaching philosophy. An address on natural history was given by Mr. A. Sherran, M.A., for which he received a hearty vote of thanks. The fourth session was opened by an address by Dr. Lewis on hygiene. The Rev. Mr. McKay gave an elaborate and instructive essay on how study should be prosecuted, after which Miss Head gave a splendidly written essay on education. Mr. Steele gave a practical and instructive lecture on the object of public school work in which he touched on hygiene, ventilation heating of the school room, objects of teaching arithmetic, history, geography and reading. Mr. Steele received a well merited vote of thanks for his excellent lecture. The Rev. Mr. McKay closed the meeting with prayer.

WENTWORTH.—This association met in the Waterdown High School, Friday, Oct. 3rd, D. H. Hunter, M.A., in the chair. The secretary, J. F. Kennedy, Dundas, read the minutes of the last meeting, which were adopted. Routine business was immediately proceeded with.

Moved by Mr. R. Vollick, seconded by W. T. Evans, that the association hold its next meeting in Dundas. The motion was carried at the afternoon session. A committee was appointed to select officers for the ensuing year.

The subject of Dictation was then taken up, led by J. H. Smith, Inspector of Public Schools, and ably discussed by Messrs. Kinrade, Burrard, Bickell, Maynard, Wilson, Ballard, Howard, Sharpe, Vollick, Bell, Ogden, and others.

At the afternoon session the committee appointed to select officers for the next year brought in the following report:—

President, J. D. Bissonette, B.A., Dundas; Vice-President, J. F. Ballard, West Flamboro'; Treasurer, J. H. Smith, Ancaster; Secretary, J. F. Kennedy, Dundas; Councillors, W. Cochrane, West Flamboro'; W. N. Stevenson, East Flamboro'; M. Sharpe, Ancaster; Miss Fisher, Glanford; J. L. Kinrade, Barton; R. McQueen, Beverly; C. O. Nichol, Binbrook; J. Kew, Saltfleet. Adopted.

The teaching of composition and practical English was the next subject. The discussion was led by Inspector Smith, and some valuable ideas were elicited from several of the members present.

The "Entrance Examination" was then taken up by the chairman in a very able address, wherein were shown the defects in this very important branch of our educational system. A copy of the same will be forwarded to the Education Department. The evening brought all the friends of Education in this locality to the Drill-Shed, where a concert had been arranged by Prof. Johnston, of Hamilton, assisted by Misses Walton, McIntyre, Bowes, Messrs. Morton and Anderson, of Hamilton, and Miss M. Fraser, of Waterdown. Inspector Smith addressed the meeting in a few well chosen words, congratulating the ratepayers on the success of education in this part of the county, and throughout the county in general. D. H. Hunter filled the chair in his usual happy style. Next day Mr. W. N. Stevenson took up "Perspective Drawing," and showed very clearly how the appearance of natural objects may be transferred to paper by a few simple and well understood rules; that cubes, pyramids, globes, etc., may be copied with accuracy. The discussion on drawing was continued by Miss E. A. Baskerville and J. F. Kennedy, of Dundas.

Mr. J. F. Kennedy then showed how a lesson in geography should be taught. The old system of beginning with the complex and going to the simple he condemned.

Rev. W. A. Robertson, B.A., next read a very amusing and highly instructive paper on Rhetoric, showing a great many fatal errors that may be avoided by proper attention of the teachers to accent and pronunciation.

The association then adjourned, all expressing great satisfaction at the success of the meeting. This is the first meeting held outside the city of Hamilton. It is to be hoped that the itinerant process will continue in its progress.

PRINCE EDWARD.—The half-yearly convention of the Teachers' Association of the County of Prince Edward, was called to order, Oct. 17th, by R. W. Murray, president, and opened in prayer by G. D. Platt, B.A., Inspector. The minutes of the last meeting were read and approved. The calling of the roll was deferred until the afternoon, and H. M. Faul engaged the attention of the convention by presenting his methods of solution of the problems in Arithmetic, set at the July examination, for 3rd and 2nd class Certificates. His methods met with the approval of the teachers assembled. Mr. Rose, of Milford, was next called upon for history. His method was very good. Mr. Brown made a few remarks upon teaching history, showing how he made it a very interesting subject for his classes. A general discussion followed concerning text books on history and the following resolution was brought forward:

Resolved,—That in the opinion of this convention, Collier's history is superior to Edith Thompson's.—Carried.

At half-past one convention was again called to order, and Mr. J. J. Tilley, Model School Inspector, took up the subject of composition. His was an excellent paper, and well received by the convention. Miss Williamson then gave an excellent essay on the relation of a teacher to his school. She was highly complimented by the inspector, who said that she practised what she had read, and was second to none in the county, in neatness of school-room and thoroughness of work in the school. A communication respecting teachers' convention was next read by the president. The following officers were elected for the ensuing year:—President, H. M. Faul; Vice-President, Mr. Trumpour; Secretary, Mr. Weeks; Treasurer, Mr. Platt, B.A., Inspector; Executive committee, Messrs. Brown, Dobson, Rose, Murray and Miss Williamson. In the evening an excellent address was delivered by J. J. Tilley, in the Town Hall. A very large number from the town and vicinity were present. Saturday Mr. Tilley was first called upon for Geography. After a short introductory speech on the subject of Geography, violently condemning the burdening of the child's mind with the thousands of little names of places, etc., and authorized geographies, he proceeded to show how the subject should be taught to juniors. For senior pupils the following order of taking up the geography of a country was recommended: I. Physical features, (*a*) mountains, (*b*) water divisions. II. Climate of different parts. III. Different plants. IV. Animals. V. Minerals. VI. Exports and imports., including water routes. VII. Inhabitants, commerce and occupations. VIII. Towns and cities. IX. Government. Algebra by Mr. Dobson, papers of 1884. The questions were handled in his usual short and accurate style. The president answered the questions presented in the question-drawer. "School Ethics or the Relation of the Teacher to his Work," by Mr. J. J. Tilley. This was taken under these headings: Relation, 1st to patrons, 2nd to children, 3rd to each other. The following useful hints were given and commented upon: Influence of the teacher should not be confined within the four walls of the school room. A teacher should be a perfect model for imitation. He should visit the people. There should be perfect harmony between the teacher and the parents. There should be a very close relation between the teacher and trustees. A trustee should visit the school often, and make himself perfectly familiar with the working of the school. Children should be taught things that will be beneficial in after life.

REVIEWS.

GEMS FOR LITTLE SINGERS.—*Oliver Ditson & Co., Boston.* This is a collection of easy and pleasing songs for primary and kindergarten schools and the nursery, compiled by Miss Elizabeth N. Emerson and Miss Gertrude Swain, assisted by Mr. L. O. Emerson. The ladies deserve much credit for getting up such a pleasing little book. The melody is easy, the words appropriate, and the illustrations attractive. There are a few motion songs; we think there ought to be more, as these are useful as well as pleasurable. The book is very neatly gotten up, and from its appearance and the nature of its contents it should be in use in every place where infant education is carried on.

THE NORTH AMERICAN REVIEW for November contains, among other interesting matter, a striking article on "Half Time in School," by the Rev. Dr. E. L. Hale. The author holds that a half-time system would be more advantageous, not only for the younger pupils, not only for special classes, such as the children that begin to work in mills about the age of twelve, but for all. Too much of a civilized child's time is spent within the walls of his clsss-room. Hence, in the first place, injury to health. Hence, in the second place, want of adaptation to the practical work of life on the part of the thoroughly schooled child, because his lessons have prevented him from having time to learn to do any other work. This leads to two evils. The majority of children are withdrawn from the public schools and set to work before they can read, write, and cipher fairly, and never afterwards have an opportunity of improving themselves in these respects. In a country where every man has a vote it is a serious thing that the school training of the masses should reach no higher point. Secondly, it has led to a demand for the introduction into the schools of manual instruction in the elements of the various trades. Boys and girls are to be taught by the schoolmaster or schoolmistress how to use various tools. This is an absurdity. The teacher probably has little acquaintance with the use of tools, and has already too many subjects to attend to. The proper remedy is some system of half time. Arrange either that each pupil shall attend only half of each day or that he shall attend every second term. In his spare time let him do any work his parents may set him, and become acquainted with nature. He will build up his constitution, acquire manual dexterity, and gain all sorts of useful practical knowledge. Probably, too, the average boy or girl of sixteen brought up on this system will not have less knowledge of the school curriculum than he has at present. The alternative of work and school will render each a pleasant relief from the other, and study will be more real while it lasts. The farmer's son outstrips the city-bred boy in the race for wealth and honor, mainly because he has practically been a half-timer, and has learnt much that schools cannot teach.

Messrs. Ginn, Heath & Company, Boston, will soon publish an introduction to the "Study of Language," being a critical survey of the history and methods of comparative philology of the Indo-European languages, by B. Delbrück, translated by E. Channing.

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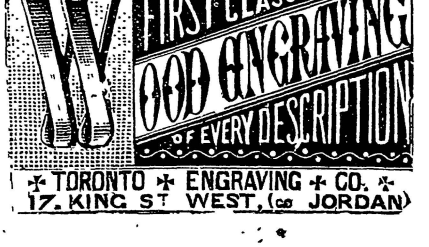
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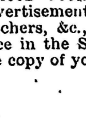
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